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The results of a questionnaire sent to 443 teacher education institutions, listed in the 1965-66 report of the National Council for Accreditation of Teacher Education, are reported in this document. Responses to the questionnaire, which elicited information about campus curriculum laboratories or equivalents, revealed that the laboratories (found in 98 percent of 331 responding institutions) are controlled by the department or school of education, by the library, or jointly by both; that staff numbers, service hours, and holdings (books, periodicals, audiovisual and numerous other materials) vary among institutions; that over 70 percent do not consider their facility a branch library and do not use the Dewey classification system; and that 62 percent process their materials in the curriculum laboratory. The responses are also evaluated according to whether or not they indicate an understanding of the purposes and function of a curriculum laboratory, defined as a place where preservice and inservice teachers are exposed to an assortment of materials for the purpose of experimentation, evaluation, and enrichment of teaching and learning. A manual for preparing materials for the curriculum laboratory, a 47-item bibliography of related readings, a resource list, and purchasing guide are appended. (LP)

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THE ROLE OF THE CURRICULUM LABORATORY IN THE PREPARATION OF QUALITY TEACHERS

By

Elinor Vivian Ellis

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Finally I dedicate this study to my husband, Richard Ellis, II, a retired Professor of Education, and son, Richard Ellis, III.

FOREWORD

Through the years, the classroom teacher has been regarded as the primary and central element in the teaching-learning situation. Today, however, an ever-increasing prominence, as a second significant factor, is assigned the materials center or curriculum laboratory.

This escalating visibility for the curriculum laboratory is in recognition of the rapidly increasing supply of teacher aids of all kinds. These include many machines, devices, programmed learning materials, self-instruction units, state adopted textbooks, manuals for teachers--all designed to facilitate the teaching-learning process.

Even though there is an increasing importance of the curriculum laboratory, there is a paucity of objective information assembled on the organization, function, and content of these instructional centers. The investigation which is reported in this study represents a serious effort of one professional worker to remedy this situation. She has succeeded admirably in her purpose and, in addition, has enhanced greatly the document by including a manual designed to assist the professional worker in the preparation of book and non-book materials for use in such centers.

Melvin O. Alston

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CHAPTER I

INTRODUCTION

Purpose. The purpose of this study is to survey curriculum laboratories in teacher education institutions listed in NCATE's report (1965-66), to ascertain information that will have direct bearing on the preparation of teachers.

THE PROBLEM

Statement of the problem. Demands for current information concerning the operation and administration of the curriculum laboratory as it functions in the preparation of teachers have prompted interest in this study. The sample for this study is limited to the 443 institutions that were listed in the 1965-66 Annual NCATE Report. Utilizing these institutions, the author of this survey will attempt to identify organizational and administrative patterns in responding curriculum laboratories; identify the influences that innovations in teacher education have on the curriculum laboratory; and present a manual for the preparation of book and non-book materials for use in curriculum centers.

More importantly, this study will attempt to establish, on the basis of services rendered by the curriculum laboratory to teacher education programs, a firmer justification for the facility and all of the correlative functions it performs.

The following questions seem to be fundamental and primary:

1. Does each institution on the NCATE list have a curriculum laboratory? If not, through what agencies does the institution provide instructional materials to in-service and pre-service teachers?
2. Does the curriculum laboratory function as an integral part of the teacher education program, or as an appendage to it?
3. What is the academic status of the personnel associated with operation and service of the curriculum laboratory?
4. Does the curriculum laboratory have a director, a supervisor, a coordinator, or is it operated by the staff in charge of curriculum development and methods courses?
5. What do the holdings of a curriculum laboratory include, and how are choices determined?
6. Does the curriculum laboratory function as a branch library?
7. What system of classification is used for the textbooks?
8. Is the cataloging of curriculum materials done in the curriculum laboratory?
9. What are the service hours for the curriculum laboratory?
10. In what ways will social change and innovations in teacher education programs affect the holdings, personnel, and services of the curriculum laboratory?

PROCEDURES

A questionnaire was designed and submitted to curriculum laboratory personnel of institutions listed in the sample. Data collected from the returned questionnaires were analyzed and interpreted. Tables were constructed to represent pertinent data. Information collected other than from the questionnaire came from letters, remarks by curriculum personnel, brochures, handbooks, and manuals. In addition to this literature was surveyed to ascertain information pertinent to this study. Included in the appendices is a manual of procedures for the preparation of book and non-book materials.

SIGNIFICANCE OF THE STUDY

The significance of this study is found in the timeliness of it. This study could be helpful during this period of revolution in education, when teacher education institutions are faced with the task of (1) up-dating their curricula, (2) providing better teaching methods, (3) providing better teaching practices, and (4) providing for up-to-date innovated professional experiences for student teachers.

The curriculum laboratory plays a major role in (1) developing curricula, (2) providing experimentation and research for setting up teaching methods and practices, and (3) providing video and micro-teaching materials for student teachers so that they can improve their teaching skills.

This study is significant in that it brings together a number of administrative and organizational patterns that were found in the curriculum laboratories from which data were obtained. These patterns can be used for the justification of (1) rank and status of staff and personnel, (2) service hour arrangement in this kind of facility, (3) administrative control, and (4) the selection of materials holdings for such a center.

The manual which is also a part of this study is important in that it provides a selection of methods for the processing of book and non-book materials. It will be helpful to those personnel who wish to write, revise or up-date their own manual. The manual also provides (1) a list of sources for free and inexpensive materials, (2) a list of cataloging and processing tools, (3) a list of companies and addresses for selection and purchase of teaching aids and other educational materials, and (4) a bibliography of useful reading sources for curriculum personnel.

Finally this study points to the need for curriculum supervisors and directors to take a critical look at their present aims and objectives, as they seek to keep pace with those social and educational goals which blend with advances in teacher education programs. Curriculum supervisors will find this study valuable as they explore ideas for expanding the services, upgrading the staff, and increasing the holdings of such a center.

DEFINITIONS OF TERMS

In order for this research to be clearly understood in the light in which it was intended, it is important that certain terms be defined.

Curriculum laboratory. A center or place where pre-service and in-service teachers are exposed to multi-assortments of instructional or educational materials for experimentation, evaluation, and for the enrichment of teaching and learning.

Educators seem to be developing a remarkable tendency to find new labels for the curriculum laboratory. This was shown by responding personnel in this study. The following names were accepted in this study as having the same meaning as the curriculum laboratory: (1) Area Curriculum Center, (2) Curriculum Library, (3) Curriculum Center, (4) Curriculum Materials Center, (5) Curriculum Materials Area, (6) Educational Materials Center, (7) Education Library, (8) Instructional Aid Center, (9) Instructional Materials Center, (10) Instructional Resource Center, (11) Instructional Materials Laboratory, (12) Learning Resource Center, and (13) Materials Center.

The preparation of quality teachers. The use of the term "preparation" in this study carries the idea of an action or process of making pre-service and in-service teachers ready to perform the service of teaching in a professional way. "Quality teacher" was used to designate the idea that the quality of teacher produced is determined by the kind of preparation received by the person in training. Therefore, this phrase was coined to bring emphasis to the kind of preparation that is necessary for in-service and pre-service teachers.

Pre-service education. The academic and professional experiences in high school, normal, college, teachers college, or university that a person had before his employment as a teacher.[1]

In-service education. Activities on the part of employed teachers that contribute to their professional growth and qualifications, for example, travel, professional reading, participation in supervisory and curriculum development programs, attendance at summer-sessions courses, etc.[2]

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[1] Carter V. Goode, Dictionary of Education (second edition; New York: McGraw-Hill Book Company, Inc., 1959), p. 550.

[2] Ibid.

CHAPTER II

A REVIEW OF THE LITERATURE

In order to establish certain facts concerning specific aspects of a curriculum laboratory, it is important to research and relate the literature that has direct bearing on the problem of this study. The following aspects of the curriculum laboratory were deemed significant to this study: (1) history of the curriculum laboratory, (2) purpose, (3) services, (4) staff and personnel, (5) holdings, and (6) innovations in teacher education, and their implications for the future of the curriculum laboratory.

A BRIEF HISTORY OF CURRICULUM LABORATORIES IN THE UNITED STATES

The idea of a curriculum laboratory emerged in the early 1920's. This idea came into being as the improvement of the curriculum became more and more necessary to meet the many changing social and educational demands of both teachers and students. According to James' study, the need or demand for materials to be produced and used in connection with curriculum development was a dynamic force in the historical development of the curriculum laboratory. Those concerned with developmental steps in curriculum preparation focused attention on this facility. Workshops were held for persons interested in curriculum programs, in order that they could receive information and experience in construction of new and better curriculum programs.

James' study listed the following dates:

1922 -- The Textbook and Curriculum Service Library was organized in Western Michigan State College in Kalamazoo, Michigan.

1928 -- Teachers College at Columbia University established a Bureau of Elementary Curriculum Research to facilitate dissemination of information about elementary school curriculums. This facility was known as the Curriculum Construction Laboratory.

1929 -- A Curriculum Laboratory was organized at Western Reserve University, Cleveland, Ohio.

1932 -- The Laboratory of Education was established at the George Peabody College. This facility was organized to meet the needs of two state groups, Florida and Virginia.[3]

Forty-three curriculum laboratories were organized between 1939-45, and one hundred and two between 1945 and 1958. James' study was completed in 1963; at the time many facilities were being organized.

PURPOSE OF THE CURRICULUM LABORATORY

The National Council for Accreditation of Teacher Education explains the purpose of the curriculum laboratory in Standard VI, Standards and Evaluation Criteria for Accreditation of Teacher

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[3] Marian L. James, "The Curriculum Laboratory in Teacher Education Institutions: Its Essential Characteristics" (a published Dissertation for the Degree of Doctor of Philosophy, The University of Connecticut, Storrs, Connecticut, 1963), pp. 30-31.

Education. Standard VII also substantiates the purpose for such a facility. Standard VI states the following:

> The strength of a teacher education program is determined in part by its supporting facilities, equipment, and materials of instruction. Some of these facilities are necessary to provide any effective program in higher education; others are required only when teacher education programs are offered.[4]

Standard VII:

> Office space, attractive in nature and ample in amount, should be provided to serve the needs of the professional education faculty in planning the professional educational program, in counseling the students and in working effectively with schools and other agencies outside the institution. Classroom space equipped for teaching professional education should be provided within a reasonably concentrated area to meet the needs of the program offered. Adequate facilities for producing and duplicating written materials should be available, and modern audio-visual equipment should be readily accessible.[5]

Standard VI:

> A materials laboratory or center should be maintained either as a part of the library or as a separate unit. In any case, it should be opened to students as a laboratory of materials of instruction and should be directed by a faculty member well informed in the various instructional media and materials at different grade levels. This laboratory

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[4] Standards and Evaluation Criteria for the Accreditation of Teacher Education. A Draft of the Proposed New Standards, with Study Guides, Standard VII (Washington, D. C.: The American Association of Colleges for Teacher Education, 1201 Sixteenth Street, December, 1967), p. 39.

[5] Standards for Accreditation of Teacher Education. . . The National Council for the Accreditation of Teacher Education. Standard VI, Washington, D. C., 1960, p. 118.

> should include a wide array of books commonly used in elementary and secondary schools; various types of materials used in evaluating learning; and curricular patterns, courses of study, and teaching units that are available.[6]

POLICIES

In order to achieve the purpose prescribed for the curriculum laboratory, it is necessary to have policies which should govern the day-to-day operation of the curriculum laboratory. Below is a list of recommended policies:

1. Extend service hours to entire college community, state, local schools, teachers and administrators.
2. Encourage suppliers to deposit and provide materials without charge.
3. Seek advice from staff on their needs before making the purchases.
4. Refer students and teachers to other centers on campus for services that the curriculum laboratory does not give.
5. Make loan periods on materials on the basis of need and availability of materials.
6. Prevent unnecessary duplication of materials that are in other agencies on the campus.
7. Arrange hours to give the best services, not less than 40 hours per week.
8. Interpret the curriculum laboratory to the college community.

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[6] Standards and Evaluation Criteria for the Accreditation of Teacher Education, Standard VII, *loc. cit.*

SERVICES OFFERED BY THE CURRICULUM LABORATORY

The concept of the curriculum laboratory as a "service center," is reflected in Anderson's[7] statement on the services offered by such a facility as being the strength of it. He warns against elaborate rules and regulations, and a supermarket impersonal atmosphere. These conditions could cause an irregular situation which would hamper services. Taylor[8] and Anderson[9] agree that not only professional services are offered in the curriculum laboratory but many activities that will help in-service and pre-service teachers do a better job of teaching. Dreg made a study of curriculum laboratories in the United States in 1947 in which he listed activities initiated by some curriculum libraries. These activities were as follows:

1. Curriculum constructing and revising
2. Collecting and assembling curriculum materials
3. Investigating problems of curriculum
4. Improving of instruction
5. Advising and directing curriculum work
6. Researching and experimenting

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[7] Vernon E. Anderson, _Principles and Procedures of Curriculum Improvement_ (New York: Ronald Press Company, 1956), p. 343.

[8] Kenneth I. Taylor, "Instructional Materials Centers and Programs," _The North Central Association Quarterly_, 40:218, Fall, 1965.

[9] Anderson, _loc. cit._

7. Producing and/or publishing curriculum materials
8. Administration
9. Lending, selling, and otherwise distributing
10. Curriculum materials
11. Sponsoring curriculum conferences
12. Offering courses in curriculum
13. Serving as a purchasing agency
14. Editing and Reviewing curriculum materials.[10]

Other necessary services may be rendered through the curriculum laboratory. Some of these services were pointed out by Sister Alma, who felt that it is essential to give student teachers and in-service teachers a wide range of experiences in the use of all types of instructional materials. It is through these materials that teachers are provoked to teach better. The following services were listed by Alma:

1. Catalog and inventory all types of teaching and learning materials, books, pamphlets, films, recordings, models, exhibits, art prints, slides, filmstrips, microfilms, and community resources.
2. Maintain and service all of the teaching tools used in the school.
3. Inform teachers and students about new developments in materials, equipment, and teaching technology.

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[10] Francis L. Dreg, Curriculum Laboratories in the United States: A Research Study. Education Monograph No. 15, 1947 (San Diego, California: Curriculum Laboratory, Office of the Superintendent of Schools, San Diego County, September, 1947), p. 36.

4. Produce materials which are unique to a specific teaching situation.

5. Provide assistance to teachers and students in the use of teaching equipment and materials.

6. Provide assistance in locating needed teaching and learning materials.

7. Provide space and facilities for teachers and students to preview, audition, review, and try out various teaching media.

8. Serve as a comprehensive learning laboratory in which students can learn to use all types of learning materials and equipment.

9. Provide for continuous evaluation of the program and services.[11]

The curriculum laboratory is of inestimable value to teacher education programs as they function to select, house, and make available newer materials for ready use. These materials reflect developments that are seen through curriculum changes in education on all levels. This type of facility is growing steadily in city, and country school systems, in colleges and universities, in state and federal departments. This is practically due to developments in educational research, action research, pilot education programs, workshops and institutes, curriculum committees, and instructional technology.[12] In short, the educational materials have placed added demands for the curriculum laboratory or any center in this vein.[13]

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[11] Sister Mary Alma, "Automated Instructional Materials Centers--The Future is Now," American School Board Journal, 153:21, December, 1966.

The staff in these centers works with students and teachers in the construction of and production of resource units, curriculum guides, manuals, and courses of study. They evaluate all types of textbooks to determine their top value in the curriculum. They investigate non-print materials, such as films, filmstrips, tapes, and recordings, in order to bring together a package of materials to go along with the textbook. This "package" has served to stimulate teachers to teach better and students to inquire more.[14]

Greater emphasis should be placed on the workshop or laboratory aspect of the curriculum laboratory. A laboratory function suggests a service that could increase the capacity of teachers to construct and up-date curriculum improvement, acquaint with newer media, encourage research in the field, set the stage for evaluation and production of necessary teaching aids; and provide experiences in experimentation on tools for teaching.

Student teachers in teacher education programs need help in their search for the best methods of teaching. These methods must be attained through assistance given to students as they explore and discover purpose, technique, self, and content matter in subject areas. Combs concurred that:

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[12] Winogene L. Bergmann, "Curriculum Libraries Are for Service: Not Storage." The American School Board Journal, 151:36, November, 1965.

[13] Ibid. [14] Ibid.

> What is needed is not courses in methods, but curriculum laboratories, places where curriculum materials are available in abundance and where students can explore and try out all kinds of equipment, supplies and materials, such that a laboratory may operate in close conjunction with libraries, but should also provide for experimenting with materials needed by teachers in carrying out their jobs. They should also be available when students can browse as they wish or work by themselves or with others. There should even be opportunity, if the student wishes, to set up materials and leave them for a period of time while he continues to experiment with them.[15]

This type of facility will give the student professional work experience in a professional setting. It is for this reason that the curriculum laboratory occupies an important place in teacher preparation programs. This facility provides a setting in which the student teacher feels free to accept or reject methods. They may interact with each other, involve themselves in argument and discussion, and test ideas in the open market.

The explosion of news media has made demands on those who supervise such a center. Knowledge of the new teaching aids, whether manual or electrical, hardware or software, and book or non-book must be present. This wide and varied type of knowledge suggests a new concept of service for such a center.[16] Miller describes the person in charge of a center of this type as a "Media Specialist." He predicts that services of a learning resource center will be widely expanded over the next few years.[17]

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[15] Arthur Combs, The Professional Education of Teachers (Boston: Allyn and Bacon, 1965), p. 110.

STAFF AND PERSONNEL

Antan states that consultative services are needed to assist teachers and students in the vitalization of the curriculum laboratory. Consultants ought to be trained as teachers, not as librarians.[18] Ahlers points out that both professional and non-professional persons with knowledge about all types of media and competencies in their interpretation and utilization should be a part of the staff of a curriculum laboratory. She also believes that librarians and audio-visual specialists can help teachers and students by supplying many types of materials and services and assist them in the multi-media approach to teaching.[19]

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[16] William J. Quinly, "The Selection, Processing and Storage of Non-print Materials, Aids, Indexes and Guidelines," Library Trends, 16:281, October, 1967).

[17] Robert H. Miller, "The Media Specialist: Broward County, Florida," Audio-Visual Instruction, 12:137, February, 1967.

[18] Eleanor Antan, "The Materials Resources of a Curriculum Laboratory" (Storrs, Connecticut: Curriculum Center, School of Education, University of Connecticut, 1959), p. 5. (Mimeographed.)

[19] Eleanor E. Ahlers, "Library Science: A Changing Concept," Educational Leadership, 23:451, March, 1966.

Cox reported a national survey which gave opinions concerning curriculum laboratory directors with regard to their academic preparation. The survey indicated that such directors should have:

1. Three or more years of teaching experience
2. Ed.D. or Ph.D.
3. An academic year of professional library training
4. Class work in curriculum and audio-visual education
5. Experience in curriculum construction and revision.[20]

The Instructional Materials Center of Gary Public Schools has some interesting qualifications and characteristics for a supervisor, director or coordinator of such a facility. These items are listed below:

Characteristics

1. The person should be a master teacher who has demonstrated the ability to teach at various levels.
2. The person should be skilled in human relations.
3. The person should have an enthusiastic and energetic personality.
4. The person should be imaginative and creative.
5. The person should have a working knowledge of curriculum guides.
6. The person should have the ability to evaluate effectively.

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[20] Carl T. Cox, "A Survey of Curriculum Laboratories," (unpublished report, Cortland New York: Teaching Materials Center, State University College of Education, 1960).

7. The person should be strong in ability to organize and plan.

8. The person should have some typing skills.

9. The person must demonstrate the ability to work with others.

Professional Training Minimums

1. At least a B.S. Degree in Education

2. Library Science--Minimum of one course, preferably Cataloging and Classification

3. A course in Children's Literature

4. A course in Curriculum Development--This course should include Unit Method-Organization, development, and presentation

5. A course in Utilization and Curriculum Integration of Audio-Visual Materials

6. A course in Preparation of Free and Inexpensive Materials

7. A course in Selection of Children's Materials

8. A course in Introduction to Reference Books.[21]

Combs states, "The supervisor or teacher of the curriculum laboratory will have to be a first-class teacher, with a wide range and variety of skills, sensitive to the needs of the students, and have an enthusiastic willingness to share himself and his skills with student teachers."[22]

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[21] Instructional Materials Center, Gary Public Schools, Gary, Indiana, 1962, Revised, pp. 3-4.

[22] Combs, loc. cit.

Bergmann gives qualities of a curriculum librarian in these words:

> The curriculum librarian needs to be considered as a leader in both curriculum and library fields, not as a housekeeper. Such leadership depends upon knowledge of the school programs in the district, of changes in teaching, and in learning methods, or experimental or pilot programs. This knowledge is necessary to help in materials selection and evaluation, in routing the right material to the right person at the right time. The librarian must learn the educational values of all types of teaching devices, the school curricula, the methods of teaching, and the learning patterns of children.[23]

The curriculum librarian must be a consultant to the extent that she is involved in the making of curriculum guides and resource units. She must be friendly, cooperative, and courteous in order that a successful image of the laboratory is portrayed.

Knight and Adams assert that, "The professional person working in the center will be more than a librarian, audio-visual person, or graphic specialist; this person will be a combination of all these, a Media Coordinator."[24] Her role is not one of a circulation librarian or processor of books, but that of one who aids students and faculty in the use of materials. The Media Coordinator must be a professional educator, who is eager and able to help provide means for better teaching and learning for all of the people concerned.

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[23] Bergmann, op. cit., p. 37.

[24] Hattie Knight and Elsie Dee Adams, "The IMC Concept," Peabody Journal of Education, 45:304, March, 1968.

A Media Coordinator must be able to diagnose the needs of students and teachers, and prescribe the best materials for them.

HOLDINGS OF A CURRICULUM LABORATORY

What the holdings of a curriculum laboratory should be is not a new question. For a long time, educators have suggested what the holdings should be. It is interesting, however, to note how the types of holdings vary from institution to institution. Church states that "the actual materials content of the curriculum laboratory will need to vary according to the type of users.[25] He suggests that a curriculum laboratory might keep curriculum materials dating back many years in order to facilitate historical and comparative research.

On the other hand, Krug points out that colleges and universities have recognized the need for curriculum materials to be housed in some central place which can be used as a workroom for individuals and groups participating in curriculum study projects. He suggested that the following types of materials should be a part of a curriculum collection: sample sets of textbooks, pamphlet series, magazines, newspapers, motion pictures, flat prints, maps, charts, globes, filmstrips, slides, models, and the like.[26]

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[25] John G. Church, "Creating A Curriculum Laboratory," California Education, 1:21, February, 1964.

[26] Edward A. Krug, Curriculum Planning (New York: Harper and Brothers, 1950), p. 299.

Dale asserts that as teachers improve their effectiveness in teaching children, instructional materials become more and more promising in meeting the demands of today. Archaeologists have revealed that men have sought for centuries to improve the learning process of children by devising aids to instruction. Dale states, further, "In buried Pompeii, for example, there were entombed for centuries stone tracing tablets designed to help Roman children learn to form their letters kinesthetically. Flash cards have been traced as far back as the fourteenth century, and Jean Baptiste La Salle, a leading Catholic educator writing in the late seventeenth century, included many ideas regarding instructional materials in a handbook for the schools he founded.[27]

The idea of speeding up learning through various devices seems to have been cherished almost as long as the organization of schools.

Combs suggests that a center might well include, "adequate storage space to house and display reproductive samples of the usual print, projected, audio, three dimensional, and demonstrative media, plus newer devices such as teaching machines, programs, and programmed text."[28]

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[27] Edgar Dale, "Improved Teaching Materials Contribute to Better Learning," Chapter X of The American Elementary School (ed. Harold G. Shane. New York: Harper and Brothers, 1953), p. 233.

[28] Combs, *op. cit.*, p. 1062.

Fortado, Holly and Stull in the spring of 1961 surveyed fourteen teacher-training institutions. They found that some progress had been made in increasing the types of holdings in some of the institutions included in the study. These institutions added non-print materials, projectors, listening posts, filmstrips, turntables, recorders, and transcriptions.[29] They observed also that the concept of an instructional materials center includes a comprehensive collection of all media of communication useful for instructional purposes. They concluded that few teacher-training institutions have gone beyond the older concept of a curriculum laboratory as a small section of the library with some textbooks and a few courses of study.

The adequacy of the curriculum library depends on the materials housed and the organization of those materials. Bergmann listed the following items as being the holdings of the Milwaukee Public Schools Curriculum Library:

The Profession Collection

> This includes books rather general in scope and nature, and pertains to the areas of philosophy, supervision, administration, methods of teaching, general curriculum; also included are books pertaining to specific subjects such as creativity, school-community relations, problems of large urban areas, special

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[29] Robert J. Fortado, Edward G. Holley, and Louis Stull, "Some Materials Centers in the Midwest--A Further Look," *Journal of Teacher Education*, 14:80, March, 1963.

education for the exceptional child. Included with this group are the government documents pertaining to education, the publications of the U.S. Office of Education and of the many professional associations.

Reference Books

This is a rather extensive collection of general reference books; indexes; city, county, and state laws affecting schools. Booklists are available for use, particularly by the central office staff.

Professional Magazines

A large selection of magazines is necessary for professional growth, for keeping staff members informed of new programs, trends in educational research, and evaluations of existing or experimental programs.

Curriculum Guides, Resource Units, Handbooks, and Manuals

This collection includes materials from most of the major cities as well as our own locally published materials, and are available for use by study committees or by supervisors and teachers.

Textbook Collection

(1) Sample copies of all elementary and secondary textbooks are available for examination and evaluation by teachers and supervisors. (2) A complete file of all board-adopted textbooks in use in the schools is required by the board of school directors. (3) The schools may use sets of texts in those areas where there is no adoption.

Book Collection

This collection is limited to examination copies of books approved for use in kindergarten through Grade 9. This limitation is necessary because of space problems, and because, at present, the Milwaukee Public Schools have no elementary school libraries. The secondary schools have a trained librarian, adequate library quarters, and a teaching staff who assist in ordering from standard book sources, those titles appropriate to needs of each school. The basic elementary library collection in the curriculum library is the result of the work of the supplementary book evaluation committee of teachers representing all grade levels in the elementary and junior high schools.

Special Collection

This includes (1) special collections of paperbacks representative of the major publishers in this field, the various subject areas, and of the various formats in paperbacks which are available for examination. (2) An extensive collection of the excellent reading, spelling, and general language laboratory kits is available for examination in the library or for demonstration of use by the supervisors in the schools. (3) The change in workbooks to skill texts or study-type drill materials has created a definite request for this kind of remedial-use material, and a collection is maintained on file for examination by supervisors and teachers. (4) The need for supplying the wants of the slow-learning child has made necessary a collection of high-interest, low-vocabulary books.

Departmental Collection

In addition to the collections in the curriculum library, each special subject department has its own library specifically selected for its own special needs. These books are ordered through the curriculum library, but are housed under the separate departments such as art, music, physical education, guidance, psychological services, special education for the handicapped. The curriculum library also maintains a form of departmental library within its own quarters. This is a collection of professional books, magazines, and pamphlets for the reference and use of the school librarians. Examples of testing materials are kept on file in our department of psychological service but are readily available there.[30]

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[30] Bergmann, op. cit., p. 37.

Miller concluded in an article, "The Instructional Materials Center," the following:

> In materials centers all learning materials have equal status and receive consideration. The collection may contain the whole range of materials used in teaching printed matter such as books, pamphlets, periodicals, audio-visual materials such as slides, filmstrips, recordings and the equipment needed to use them as equally available to teachers and students. Free and inexpensive materials, charts, clippings, globes and maps are also included, as less common but useful maps are also included, as are less common but useful items such as models, specimens, diaramas, bulletin board materials, exhibit and display ideas, scripts, fieldtrips, community files, professional books, periodicals, and all manner of things which will make instruction more effective are housed in the center.[31]

In spite of the fact that curriculum personnel have had problems, when deciding what should or should not be included in the holdings of a center, Dane suggests "Anything that can be used to aid learning will find a place in the instructional materials center of the future.[32] The contents of centers in this vein will be based on the individual needs of learners. These needs may be met through all types of materials which can enrich the school curriculum. These materials must not be limited to books, fiction, non-fiction, reference books, pamphlets, brochures, catalogs, dictionaries, indexes, films, tapes, maps, charts, pictures, recordings, realia, transparencies, slides, filmstrips, and models.[33]

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[31] William C. Miller, "The Instructional Materials Center," Educational Leadership, 18:264, March, 1961.

[32] Chase Dane, "The School Library as an Instructional Materials Center," Peabody Journal of Education, 41:81, September, 1963.

McMahan suggests that a "center" might well include the following:

> 1. A resource and materials area of adequate size and with appropriate storage facilities to house and display representative samples of the usual print, projected, audio, three-dimensional, and demonstration media plus newer devices such as teaching machine programs and programed texts. A card catalog of materials in the center, plus producers and publishers catalogs, courses of study or curriculum guides, and bibliographies would also be located here.
>
> 2. An equipment area for closed circuit television reception should be available in each classroom, other equipment should be stored in the center or kept in strategically located subdepositories for distribution on request.
>
> 3. Individual learning spaces, permitting students not only to engage in the more traditional independent learning activities such as reading, viewing and evaluating media, and practicing equipment operation, but also in newer ones such as: . . . using self-instructional multi-media programs to obtain information on media selection, utilization, and production. . . responding to simulated problems in use of media and obtaining feedback as to the adequacy of such responses (the problems to be presented by means of the inbasket technique, slide or film sequences, or computerized program.) . . . using audio or video tape recorders to record and evaluate a demonstration lesson prior to presenting it to a group. . . viewing video tapes of respected teachers using media. . . listening to audio tapes of taped talks by outstanding educators. . . creating media for classroom demonstrations (e.g., transparencies, slides, charts, models, mounted pictures, etc.) . . . exploring use of the

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[33] Knight and Adams, loc. cit.

newest instructional devices (e.g., video tape recorders, micro-projectors, language masters, reading pacers, etc.)

For purposes of efficiency and convenience, certain learning spaces, such as those used in teaching equipment operation or production skills, might be arranged in self-contained equipment or production laboratory areas. Some individual learning spaces would need to be open, some semi-closed, some enclosed and soundproof. Permanent positioning of equipment, when feasible, would greatly facilitate the program.

4. Group learning spaces, including: . . . a model classroom with a full complement of display, demonstration, and projection facilities, with the capability of receiving closed-circuit television, telectures, and computerized programing; this area to be used for micro-teaching, student and staff demonstrations of media use, group previewing and evaluating, media classes, and workshop sessions with in-service teachers. . . a studio adjacent to the classroom in which video and audio taping could be done and from which closed-circuit television programs could be originated. . . conference rooms for students and staff.

5. Work and storage areas for the center and staff, including the usual staff offices, plus areas for receiving, processing, and cataloging materials and equipment.[34]

INNOVATION IN TEACHER EDUCATION: IMPLICATIONS FOR THE CURRICULUM LABORATORY

Changes and innovations in teacher education have placed increased demands on the curriculum laboratory. These demands can be seen through the needs of pre-service and in-service teachers, as they quest for better teaching and learning methods through the use of all kinds of instructional materials. These instructional materials range from printed to non-print; manual to electrical devices; audio-visual and manipulative devices.

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[34] Marie McMahan, "A Challenge: The System Approach in Development of Media Competencies," Audio-Visual Instruction, 12:1062, December, 1967.

The curriculum laboratory, like other agencies on the college campus, is being caught up in the surge of change to the extent that there is an immediate need for re-defining its role in teacher education program. The term "change" has reference to innovations in teacher education. The word "innovation" as it relates to education must be defined. In "The Public and Innovation," Purdy defines innovation in relationship to education:

> Innovation in education is the creative selection, organization, and utilization of human and material resources in new and unique ways which result in the attainment of a higher level of achievement of the defined goals and objectives.[35]

Purdy further characterizes an innovation as follows:

1. It must have meaning to be understood by others.
2. It must pass the test of acceptance by others as being worthy of implementation.
3. The process of more general implementation must have been (or be in the process of being) initiated.[36]

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[35] Ralph D. Purdy, "The Public and Innovation," Educational Leadership, 25:296, January, 1968.

[36] Ibid.

In education, innovation plays an increasingly significant role in the projection of school programs that will provide a quality of excellence in education and insure a better investment in human lives. On this same subject, Goodlad asserts, "Perhaps the most potentially powerful innovations are those which are designed (1) to be responsible to the explorations of the student; (2) to enable the student to be self-propelling; (3) to extend the range of stimuli to all of the senses; (4) to provide several alternative means to common ends; and (5) to free the teacher from burdens of routine correcting and testing."[37]

Some instructional innovations include (1) computerized instruction, with voices, music, color, and so forth being added to the typed word as a stimulus to be manipulated or responded to by the student, (2) programmed instruction with or without machines, (3) recorded and filmed lessons in combination with television and video tape, (4) "packages" of many different kinds of instructional materials and devices, each designed to serve its unique purpose, (5) computerized recording of pupil programs, assignments to lessons, monitoring of progress, and (6) print-outs of student and teacher or both.[38]

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[37] John I. Goodlad, "Innovations in Education," The Educational Forum, 31:280-281, March, 1967.

[38] Ibid., p. 281.

Knowledge explosion can be seen through mass production of teaching materials. The exhaustive list of holdings for a curriculum laboratory included in Chapter IV is an indication of this explosion. Teaching materials prepared by industry for teachers and student teachers may be used to perform various teaching tasks. These tasks may be seen through Parke's functions or uses of teaching materials.

> They aid teachers to motivate learners, diagnose class and individual needs, organize instruction and materials of instruction, teach and guide learning, counsel and advise pupils, evaluate pupil progress, and confer with parents concerning their children. They aid administrators, supervisors, and curriculum consultants to perform similar functions in relation to the school, community, teachers, and other assigned personnel.[39]

Parke calls attention to sources that produce printed teaching materials. They are as follows: The U.S. Office of Education, curriculum centers, state departments of education, city and county school systems, university research departments, professional organizations, foundations, and publishers.[40] The Association for Supervision and Curriculum Development is engaged in the production of an annual list of curriculum materials, such as curriculum guides, handbooks, manuals, and special reports. These are available for purchase.

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[39] Margaret B. Parke, "Teaching Materials and Their Implication," Review of Educational Research, 36:380, June, 1966.

[40] Ibid.

Mass quantities of materials produced currently have focused not only on the improvement of education of educators, but on the improvement of centers as the curriculum laboratory in order that they may house and service these materials.

If teachers are going to do a thorough job of teaching, and students are going to learn to their maximum capacity, the teacher must employ a wide and qualitative selection of all types of teaching materials. Therefore, it is very important that teacher education institutions accept the responsibility for preparing teachers to use these materials. Teacher education programs must adequately support their curriculum centers so that the quality of their service will enhance the overall program.

As times change, and demands for books, periodicals, films, transparencies, recordings and programs become more essential to education, there must be enough "hardware" on hand to handle and use the "software."[41] Hughes asserts, that classroom teachers in American schools typically strengthen teaching by using various instructional aids. Instructional aids may help to bring teaching more closely in line with factors that encourage effective learning. The idea of teaching aids stems from a conviction that teaching methods need considerable improvement and that wide use of such aids may help to achieve this.[42]

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[41] Raymond Wyman, "The Instructional Materials Center: Whose Empire," Audio-Visual Instruction, 12:114, February, 1967.

During this period of educational revolution, educators are faced with the task of re-defining and up-dating goals for teaching and learning. Curriculum centers serve as a reservoir to cope with knowledge explosion, and also to serve as a core or hub for the educational revolution.[43] These centers can provide all types of instructional and enrichment materials to aid teaching and learning.

This study shows that the curriculum laboratory should include all types of teaching and learning materials. Textbooks both elementary and secondary should form the nucleus of a collections. Currently there are many changing views on the role of textbook teaching on all levels of education. Lewis calls attention to the fact that the textbook today is usually accompanied by the teacher's edition, manual, workbook, test, and even tapes, records, filmstrips, and manipulative items.[44] "These components are not the so-called 'correlated' materials but are integral and planned parts of the instructional approach."[45] A combination of teaching materials as given above were designed to be used as a "total package." Other enrichment materials are "boxed" laboratories for evaluation and individual study, programmed units of courses for use with or without the teaching machine, numerous manipulative devices, and an enormous supply of records and tapes related to all subjects in the curriculum.

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[42] James Monroe Hughes, Education in America (second edition; New York: Harper and Row Publishers, 1965), p. 507.

[43] E. Michael Brick, "Learning Centers--The Key to Personalized Instruction," Audio-Visual Instruction, 12:788, October, 1967.

[44] Phillip Lewis, "Emerging Technology and Instructional Systems," National Elementary School Principal, 43:35, September, 1963.

[45] Ibid.

A continual explosion of knowledge reverberates within libraries of all kinds, but particularly in those dedicated to keeping abreast of changes significant to elementary and secondary education. The impact of curriculum change is felt in such areas as individualized instruction, ungraded school programs, team teaching, and recent developments in the arts with increased attention to vocational education.

The programmed textbook is a new type of instructional aid which offers opportunity to increase the effectiveness of the teacher. Programmed materials afford time for the teacher, so that he can devote more time to the learning processes on an individualized basis.

Programmed instructions relieve the teacher from tasks of preparation of routine and repetition in subject matter, and the endless correcting of errors. This is referred to as "white collar ditch digging," by Skinner.[46] Gibbs refers to programmed instructional materials as instructional tools which aid the teacher in structuring an effective and efficient learning situation; and as carefully planned, highly structured, sequential series of learning activities designed so that the learner is guided to the achievement of a specified learning outcome through interaction with the materials.[47]

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[46] B. F. Skinner, "The Science of Learning and the Art of Teaching," Harvard Educational Review, 24:86-97, No. 2, 1954.

It is the responsibility of the teacher-educator to familiarize teachers in professional training with the rationale behind the development of programmed instruction, and provide experiences for them to learn how to use these effectively.[48] This experience could be provided through the curriculum laboratory.

Educators need to look critically and realistically at the role of instructional technology in the classroom. Taylor expresses interest in educational technology and its intricate value to learning and teaching, and suggests that extensive in-service training accompany the introduction of these devices.[49] The curriculum laboratory should be prepared to meet these needs through its services.

A position paper prepared for the Board of Directors of the Department of Audio-Visual Instruction National Association on "The Role of the Media Professional in Education" pointed out the growing educational needs of our time and the unprecedented demand for educational innovation. New relationships among people, theories, and things are producing better learning, more efficient use of human resources, and major changes in materials, facilities, and techniques of instruction. The role of the media professional in education is changing from that of a dispenser and keeper of teaching aids to that of an analyst and designer of instructional systems. Of all the changes taking place in American society, none are more extensive or important than change in education. Rapid expansion, coupled with critical shortages and urgent need for change, has led to growing realization that the school must be more amply served by good teachers and that good teaching under modern conditions requires adequate technological support.[50]

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[47] William E. Gibbs, "The Teacher and Programmed Instruction," Educational Technology. 7:9, June 15, 1967.

[48] Ibid, p. 11.

[49] Taylor, loc. cit.

Attention has been shifted from the teacher as an imparter of information to his position as guider of individualized learning. The teacher is free for a more creative role in guiding the learner, the learner is free for a more active participation in his own learning tasks. Technology has supported these changes and projected a new set of goals for education.

In this same vein, educators are involved in relating instructional technology to innovation in education. Robert Heinch, a prominent figure in the field of teacher education, states "A great deal of attention needs to be given to the term technology as it applies to education." Charles F. Hoban gives the following definition for the term technology as it applies to education:

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[50] Ibid.

> The point here is that the term educational media does not, in itself, suggest the ramifications for research and for educational policy and operating procedures which are inherent in the term, "technology of education." Technology is not just machine and men. It is complex, integrated organization of men and machines, of ideas, of procedures, and of management. The introduction of this complex organization generates many systematic problems that can be and have been ignored or generally neglected in theory, research and practice in education. The term "educational technology," expands the area of theoretical development, research, and implementation in education.[51]

The entry of instructional technology into curriculum planning has specific implications for teacher training programs. These programs must (1) expand their curricula to include courses pertaining to operation and use of technological devices, (2) provide courses that will involve the use of these devices in formulating units of work and daily lesson plans, and (3) provide courses that will involve research on the use, effects and outcomes of the use of technological devices. Educators need to engage in dialogue with industries who are responsible for the production of these devices. Those who engage themselves in curriculum planning must shift their attention from teacher performance to that of the student, and to instructions which develop skill in inquiry, problem solving, and the shaping of other complex behavior processes.

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[51] Kenneth, Norbert, et. al., "The Role of the Media Professional in Education," Audio-Visual Instruction, 12:1027, December, 1967.

Bishop asserts, "technology can make a new curriculum." He views a curriculum as what transpires when the learner confronts plan, media, and method. A curriculum is the "happening" as each learner confronts his environment and learns to construct a universe that has meaning for him.[52]

With the increasing need for curriculum planning, curriculum design, curriculum research and development, curriculum centers in the framework of the curriculum laboratory become more and more important.

Administrators and other educators who plan teacher education programs must look realistically at changes that affect the preparation of in-service and pre-service teachers. They should participate in research that will bring light to those ideas presented to them through the masses of written materials. They must be able to make decisions on instructional methods and thoroughly realize the impact that they have on educational advances.

Goldstein expresses hope that those designers of the formal training programs, who have the responsibility of preparing teachers, will seek newer ways to prepare them to deal more effectively with newer media within education.[53]

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[52] Leslee J. Bishop, "Technology and the Possible Curriculum," Audio-Visual Instruction, 13:223, March, 1968.

[53] Harold Goldstein, "The Importance of Newer Media in Library Training and the Education of Professional Personnel," Library Trends, 16:262, October, 1967.

New curricular devices are needed to accommodate valid elements of Western and American culture. Mayhew states:

> First, it is quite apparent that American technology has produced a wide variety of devices which could be used in education, motion pictures, television and its more recent developments of video tape and effective kinescope, tape recorders, electronic information storaging machines, test-scoring devices and recording devices of high fidelity are all in existence.[54]

The breadth and depth of new knowledge demand a broadening of the scope of the holdings of materials centers. New educational objectives must be defined; new kinds of learning sequences be developed; new educational techniques be determined in addition; and new teaching patterns as well as new media will be required to implement these learning sequences most effectively and efficiently.

In accord with the state of teacher education programs, Lindsey verbalizes in these words:

> The teacher educator has a toe in tomorrow but his torso is tied to today. The teacher trainer is faced with the dilemma of preparing people to conceptualize the inconceivable. While the scenery and plot can be anticipated, those who prepare teachers are at the rehearsal stage of a play for which the script is not yet written.[55]

A major decision must be made concerning the role which teacher education will play in preparing the potential teacher for the possible future.

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[54] Lewis B. Mayhew, "Innovations in Higher Education," Contemporary Issues in American Education (Consultant's papers prepared for use at the White House Conference on Education, July 20-21, 1965), p. 117.

[55] *Ibid.*, p. 33.

THE CHANGING CURRICULUM LABORATORY AND ITS FUTURE OUTLOOK

It is difficult to envision what a curriculum laboratory or instructional materials center will be like ten years from now. Educational technology and other innovations in education may make the conventional curriculum laboratory outmoded. This is possible if centers in this vein do not accept the challenge to re-evaluate their services and up-date them to meet the educational goals of teacher education programs. In reference to change, all directional signs point to some rather striking ones. These changes can be seen in the use of new teaching methods, devices, and skills. These changes can be seen through demands made on the curriculum laboratory to (1) expand its quarters to accommodate individualized listening, viewing, and monitoring, (2) provide a well equipped production and construction area, (3) provide housing for technological devices, (4) provide adequate personnel to administer the necessary services, and (5) execute a budget that will support the overall program of this facility.

The curriculum laboratory will exist and continue to grow as it expands its services in the preparation of in-service and pre-service teachers. In fact, all information carriers can be made to serve human needs or ends. This in itself is important because service to people will never become an obsolete commodity. However, we must have the imagination to come up with ideas for the utilization of these centers. We must have the courage to put ideas into practice and wisdom to evaluate them for their potential.

If the curriculum laboratory is to continue its role in the preparation of teachers, those who maintain it must constantly evaluate, appraise and up-date its services, holdings, and basic philosophy not only to meet the aims and objectives for which it had its origin, but to relate those social end educational perspectives that tie the past to the present and project a fruitful outlook for teacher education programs.

CHAPTER III

METHODS AND PROCEDURES

SELECTION OF THE SAMPLE

A two-fold criterion was used to select the sample for this study. The 443 institutions included in the sample are found in 48 states of the United States, and are listed in the 1965-66 Annual NCATE Report. The two criteria for the selection of the sample are:

1. Institutions in this sample have met the necessary standards for accreditation of teacher education institutions, and could well be the standard setters for other institutions which have not measured up to the high standards of NCATE.
2. Curriculum laboratories found in these institutions have measured up to the evaluative criteria of NCATE, and should show superior patterns in the areas in which this study seeks to examine.

THE SURVEY

The researcher elected to employ the survey method in order to establish the existing administrative and organizational patterns in curriculum laboratories in the sample.

Changing patterns in organizational and administrative aspects of the curriculum laboratory reflect change or innovation in teacher education programs. Therefore it was felt that a survey of the curriculum laboratory in each of the institutions would reveal some facts and factors through which the curriculum laboratory projects in the preparation of both in-service and pre-service teachers.

THE INSTRUMENT

The instrument used in this study was a questionnaire constructed by the writer. The questionnaire was designed to elicit information regarding:

1. Existing curriculum laboratories or other agencies that offer the same or equivalent services
2. Administrative control of the curriculum laboratory
3. Staff and personnel
4. Service hours
5. Holdings
6. Whether this facility functions as a curriculum laboratory or as a branch library
7. Where materials are processed and methods used.

HANDLING OF DATA

Raw data were collected from returned questionnaires. The procedure for handling all data was as follows: (1) frequencies and responses on each item were charted, (2) percentages of the total response to each item were charted, (3) tables were constructed to show the statistical findings.

CHAPTER IV

FINDINGS

ANALYSIS OF DATA COLLECTED

A questionnaire was prepared to obtain information concerning the current status of the curriculum laboratory in 443 institutions. There were 331 or 75 per cent who responded to this questionnaire. These institutions represented 45 states of the United States.

Items 1 and 12 on the questionnaire were designed to find out if each participating institution had a curriculum laboratory. If the institution did not have a curriculum laboratory, what agencies in the educational program offered the services of such a facility?

Items 1 and 12 are represented in Table I which shows the number of institutions responding, the number not responding, the number with a curriculum laboratory, the number without a curriculum laboratory yet offering the same services through other agencies on the campus, and the number of institutions without this facility.

Data collected from these two items show the following: 75 per cent of the institutions responded to these items; 25 per cent did not respond; 92 per cent have a curriculum laboratory; 6 per cent offered the same services as the curriculum laboratory does through other agencies on the campus; and 2 per cent did not have a curriculum laboratory, nor did they have the services offered elsewhere on the campus.

TABLE I

THE NUMBER OF INSTITUTIONS REPORTING A CURRICULUM LABORATORY, NUMBER WITHOUT IT, AND NUMBER OFFERING THE SAME SERVICES THROUGH OTHER AGENCIES ON THE CAMPUS

Number of Institutions Responding	Number not Responding	Number of Institutions with a Curriculum Laboratory	Number of Institutions without a Curriculum Laboratory Yet Offers the Same Service	Number of Institutions without a Curriculum Laboratory
331	112	303	19	9
75%	25%	92%	6%	2%

There were specific implications for teacher training programs represented in each institution with a curriculum laboratory or the equivalent services. The presence of such a facility insures a laboratory experience which is necessary for the training of pre-service and in-service teachers. There is a greater possibility or firmer basis for curricular change within the teacher education program.

Specific patterns can be seen in institutions which did not have a curriculum laboratory in the framework in which this report was intended. These institutions were usually large with large enrollments, and were leaning away from the old conventional type of curriculum laboratory towards a Media Center, Learning Resource Center, and other names as mentioned in Table X. This trend toward a more comprehensive type of center indicates a need for the curriculum laboratory to constantly evaluate its functions, aims and objectives in light of social and educational changes.

Items 2 and 3

Items 2 and 3 were designed to ascertain administrative and organizational patterns in the curriculum laboratories in the participating institutions. These items ask if the curriculum laboratory operates under the school or department of education. If the answer is "no," where does the authority originate?

Items 2 and 3 are represented in Table II which shows the following data: 92 per cent of the institutions responded to these

8 per cent did not respond; 56 per cent had their authority originating with the school or department of education; 37 per cent had their authority originating with the college or university library and the school or department of education.

Curriculum laboratories under joint control between the library and school or department of education were usually housed in the library building. This arrangement could enhance the services through longer service hours, more personnel, services of a professional cataloger, increased budget, and the services of a specialist or consultant in the area of curriculum construction or development. The 52 per cent seems to indicate that the curriculum laboratory is a necessary part of the teacher training program, and should be under its control or direction.

Items 4 and 5

Item 4 asked the question, How many persons are on the staff of your curriculum laboratory? Responses to this question indicated a wide range in numbers of staff and personnel. The range was from none to 22. Factors governing the number of staff as listed by the respondents were as follows:

1. The lack of financial support for this facility
2. Limited space for functions to be performed
3. Lack of interest on behalf of the department of education
4. Lack of trained personnel for the positions
5. Lack of communication between the staff of the curriculum laboratory and those who control the budget.

Item 5 was concerned with the rank of the staff of the curriculum laboratory. This item is represented in Table III. Data collected from item 5 reveal the following: 67 per cent responded to this item, while 33 per cent did not respond; 1.5 per cent had the services of an A.V. specialist; 4.9 per cent had the services of a person whose rank was associate professor. The 4.9 per cent pattern was common in those institutions that did not employ a full-time person to direct or supervise the laboratory. A person with the rank of assistant or associate professor usually taught courses in the regular teacher education program and worked part-time in the curriculum laboratory.

In spite of the fact that most of the time there was no clerk hired, there were 7.4 per cent that did employ a clerk. This person did not have a degree in business, but held a civil service rating.

TABLE II

ADMINISTRATIVE CONTROL OF CURRICULUM LABORATORIES IN PARTICIPATING INSTITUTIONS

		Lines of Authority		
Number of Responding Institutions	Number of No Responses	School or Department of Education	College or University Library	Jointly School of Education and Library
303	28	170	112	21
92%	8%	56%	37%	7%

Other staff and personnel rank were reported as follows: 5 per cent doctoral candidate; 4.9 per cent full professor; 10 per cent graduate assistant; 1 per cent instructor/librarian; 22 per cent instructor to full professor; 13 per cent librarian; 1 per cent library assistant; 1 per cent no rank; 23 per cent student aid or assistant; 5 per cent staff to professor; 5 per cent technician; and 4 per cent work-study.

It is possible that this wide range of staff rank and types exist because there is no core of standards spelled out by those who administer teacher education programs as far as this facility is concerned. Data collected on this item show a thread or pattern which finally identifies each curriculum laboratory with the type of service that it renders in the teacher education program.

TABLE III

THE RESPONSE OF PARTICIPATING CURRICULUM LABORATORY PERSONNEL, CONCERNING THE RANK AND STAFF OF THEIR FACILITY

Personnel and Staff Rank	Number of Responding Institutions	Percentages
A/V Specialist	3	1.5
Assistant Professor	10	4.9
Associate Professor	10	4.9
Clerk	15	7.4
Doctoral Candidate	1	.5
Full Professor	10	4.9
Graduate Assistant	20	10
Instructor/Librarian	2	1
Instructor to Full Professor	45	22
Librarian	27	13
Library Assistant	2	1
No Rank	2	1
Student Aids	46	23
Staff to Professor	1	.5
Technician	1	.5
Work Study	9	4
Total	204	106

Item 6

Item 6 was designed to collect data on the service hours of participating institutions. There have been no established service hours set forth for the curriculum laboratory by those who accredit this facility, or by those who administer the same. Therefore, it seems important that this aspect of the laboratory should be examined.

The data collected on item 6 is represented in Table IV. There were 8.7 per cent who responded to this item, while 13 per cent did not. The service hours reported were as follows: 13.9 per cent had service hours ranging from 1-39 hours; 29.7 per cent had from 40-49 hours; 10 per cent had from 50-59 hours; 9 per cent had from 60-69 hours; 8 per cent had from 70-79 hours; 9 per cent had from 80-89 hours; 2.3 per cent had from 90-99 hours; 99 per cent had from 100-up; 3.3 per cent had regular library hours; 66 per cent had self-service; and 66 per cent had service on request.

The statistics as analyzed in the preceding paragraph show the 40-49 hour arrangement to be most popular. It is important that some standards be set up or that the prevailing patterns be identified, in order that those personnel who are new in the area of curriculum services will have some idea of the desirable service hours. By the same token, those who administer this facility will be able to justify their arrangement of service hours.

Those respondents who housed their curriculum laboratory in the college or university library took advantage of the library service hours and staff assistance. They used the economic aspect to justify their arrangement. The 66 per cent who had hours open upon request explained the following procedures: The staff in the school or department of education allowed students to use their keys to the curriculum laboratory at arranged hours. Sometime faculty members brought their classes to the curriculum laboratory to use the facility in the preparation of units, lesson plans, materials, production, and curriculum construction or planning. Self service was represented by 66 per cent. This type of service was very unpopular; however, the respondents felt that it gave the client freedom and a sense of responsibility as a future teacher. No staff was on duty, but student help was used to keep the collection tidy. Sometimes a "caretaker" was hired to keep the collection.

It appears that little attention has been given to service hours in the past; however, as changes take place in education and standards of excellence are pursued, more concern must be given to the service hours allotted to this facility.

TABLE IV

THE DISTRIBUTION OF SERVICE HOURS OF CURRICULUM LABORATORIES IN PARTICIPATING INSTITUTIONS

Number of Institutions Reporting Curriculum Laboratory Service Hours			Number of Institutions Reporting Regular Library Hours						Open on Request	Self-Service	No response
Range of Service Hours 1-39 Hours	Range of Service Hours 40-49 Hours	Range of Service Hours 50-59 Hours	Hours 60-69	Hours 70-79	Hours 80-89	Hours 90-99	Hours 100-up	Regular Library Hours not Named			
42	90	30	27	24	28	7	3	10	2	2	38
13.9%	29.7%	10%	9%	8%	9%	2.3%	99% or 1	3.3%	6%	66%	13%

2

Item 7

Item 7 on the questionnaire was designed to gather information on the types of materials that are a part of the holdings of the curriculum laboratories included in this study. It also seeks to show the number of items not found in the curriculum laboratory, but found elsewhere on the campus.

Data collected on this item will be reported in the following categories: (1) Books and Book Materials, (2) Periodicals, (3) Other Materials, and (4) Audio-Visual Equipment.

Table V shows the holdings of participating curriculum laboratories. It also shows the items that are found elsewhere on the campus. Data collected show the following: 65 per cent housed children's books, while 35 per cent housed them elsewhere on the campus; 62 per cent housed adolescent's books, while 38 per cent housed them elsewhere on the campus; 97 per cent housed textbooks on both elementary and secondary levels (however, a few had limited representation of state adopted textbooks); 96 per cent housed workbooks, while 4 per cent housed them elsewhere on the campus; 92 per cent housed courses of study and curriculum guides; and 8 per cent housed them elsewhere on the campus.

Periodicals

Data collected on the item which examined the holdings of each curriculum laboratory in the area of periodicals show the following: 38 per cent housed children's magazines, while 62 per cent housed them elsewhere on the campus; 47 per cent housed professional magazines, while 53 per cent housed them elsewhere on the campus; 34 per cent housed general magazines, while 66 per cent housed them elsewhere on the campus.

Other Materials

Table VI shows the following data collected from responses of each curriculum laboratory as they relate to each item named: 74 per cent housed pamphlets, while 26 per cent housed them elsewhere on the campus; 64 per cent housed maps, while 36 per cent housed them elsewhere on the campus; 66 per cent housed posters, while 34 per cent housed them elsewhere on the campus; 68 per cent housed pictures, while 32 per cent housed them elsewhere on the campus; 60 per cent housed tests (specimen sets), while 40 per cent housed them elsewhere on the campus; 64 per cent housed charts, while 36 per cent housed them elsewhere on the campus; 46 per cent housed diagrams, while 54 per cent housed them elsewhere on the campus; 65 per cent housed catalogs (publishers' and supply catalogs), while 35 per cent housed them elsewhere on the campus; 29 per cent housed college bulletins or catalogs, while 71 per cent housed them elsewhere on the campus; 36 per cent housed letter sets, while 64 per cent housed them elsewhere on the campus; 20 per cent housed newspapers, while 80 per cent housed them elsewhere on the campus; 73 per cent housed units (commercial and student prepared), while 27 per cent housed them elsewhere on the campus; 43 per cent housed toys and games, while 57 per cent housed them elsewhere on the campus; 25 per cent housed *films*, while 75 per cent housed them elsewhere on the campus; 48 per cent housed *filmstrips*, while 52 per cent housed them elsewhere on the campus; 47 per cent housed *records*, *transcriptions*, while 53 per cent housed them elsewhere on the campus; 35 per cent housed *educational tapes*, while 65 per cent housed them elsewhere on the campus; 26 per cent housed realia, while 74 per cent housed them elsewhere on the campus; and 75 per cent housed *free and inexpensive materials*, while 25 per cent housed them elsewhere on the campus.

Audio-Visual Equipment

Table V shows the following responses from each curriculum laboratory concerning A-V equipment housed in the curriculum facility or elsewhere on the campus: 40 per cent housed *projectors*, while 60 per cent housed them elsehwere on the campus; 36 per cent housed *screens*, while 64 per cent housed them elsewhere on the campus; 14 per cent housed *micro-readers*, while 86 per cent housed them elsewhere on the campus; 19 per cent housed *listening posts*, while 81 per cent housed them elsewhere on the campus; 26 per cent housed *turntables*, while 74 per cent housed them elsewhere on the campus; 44 per cent housed *filmstrip viewers*, while 56 per cent housed them elsewhere on the campus.

TABLE V

A SUMMARY OF HOLDINGS FOUND IN THE CURRICULUM LABORATORY OR IN OTHER AGENCIES ON CAMPUS

Types of Holdings	Materials Housed in the Curriculum Laboratory	Percentages	Materials Housed in Other Agencies on Campus	Percentages
Books				
Children	196	65%	107	35%
Adolescent	187	62%	116	38%
Manuals	293	97%	10	3%
Textbooks	303			
Workbooks	291	96%	12	4%
Courses of Study and Curriculum Guides	279	92%	24	8%
Periodicals				
Children	116	38%	187	62%
Professional	142	47%	161	53%
General	102	34%	201	66%
Other Materials				
Pamphlets	224	74%	79	26%
Maps	193	64%	110	36%
Posters	200	66%	103	34%
Pictures	206	68%	97	32%
Tests	181	60%	122	40%
Charts	194	64%	109	36%
Diagrams	138	46%	165	56%
Catalogs	197	65%	106	35%
College Bulletins	87	29%	216	71%
Letter Sets	109	36%	194	64%
Newspapers	62	20%	241	80%
Units-Commercial and Student Prepared	221	73%	82	27%
Toys and Games	131	43%	172	57%
Films	76	25%	227	75%
Filmstrips	145	48%	158	52%
Records, Transcriptions	143	47%	160	53%
Educational Tapes	106	35%	197	65%

TABLE V (continued)

A SUMMARY OF HOLDINGS FOUND IN THE CURRICULUM LABORATORY OR IN OTHER AGENCIES ON CAMPUS

Types of Holdings	Materials Housed in the Curriculum Laboratory	Percentages	Materials Housed in Other Agencies on Campus	Percentages
Other Materials cont'd				
Realia	80	26%	223	74%
Free and Inexpensive Materials	228	75%	75	25%
Equipment				
Projectors	120	40%	183	60%
Screens	109	36%	195	64%
Micro Readers	43	14%	260	86%
Listening Post	57	19%	246	81%
Turntables	80	26%	223	74%
Filmstrip Viewer	134	44%	169	56%

Item 8

Item eight on the questionnaire was stated as follows: Is the curriculum laboratory considered a branch library? Responses to this item as shown in Table VII reveal 24 per cent of the participants regarded their curriculum laboratory as a branch library. This facility in institutions represented by the 24 per cent usually was controlled by the college or university library. There were 71 per cent who responded "no" to this item. They considered this facility in the framework of curriculum development as it relates to construction and production of curriculum materials for the improvement of teaching and learning.

The responses of the 24 per cent on this question reveal a misconception of the function and purpose of this facility. Curriculum development personnel are not needed if the curriculum laboratory is treated as a library or branch library. There will be a waste of time and personnel and finance if this facility should operate or function as a library. There would be duplication in holdings, services and other functions which would not enhance the total college or university program. The curriculum laboratory will defeat its purpose should it fall short of its aims and objectives. It is particularly significant, however, that a curriculum laboratory, as indicated by 71 per cent of the responses, should be an integral part of the teacher training program and should function to reflect the aims and objectives of a quality program for teacher training.

TABLE VI

THE RESPONSES BY PERSONNEL IN PARTICIPATING
CURRICULUM LABORATORIES, AS IT RELATES
TO THE FUNCTIONING OF THEIR FACILITY
AS A BRANCH LIBRARY

Item Examined	Yes	No	No Response
Do you consider your curriculum laboratory as a branch library?		216	14
	24%	71%	5%

Item 9

Item nine stated the following question: Are all materials processed in the curriculum laboratory? Table VII shows the findings as follows: 62 per cent responded "yes;" 32 per cent responded "no," while 6 per cent did not respond. Some of the institutions which responded "yes," further stated that not all of their materials, but that most of them were processed in the curriculum laboratory. These statistics have implications for the curriculum laboratory in that a person in the capacity of a librarian should be on the staff if this function is a responsibility of this facility. If the staff and personnel do not have to perform this function, they will have more time to devote to selection and other necessary functions which could enhance the services. If there is a centralized processing center on the campus, there would be a higher degree of uniformity of all materials processed. This could help to make the main catalog in the college or university library a "union catalog," which would increase the services because of its composite nature. The main catalog would then serve all areas on the campus, and at the same time function as a checkmate to prevent duplication. Darling discusses centralized cataloging and processing, pointing out not only that this method is economical but that it frees the librarian for other necessary services.

It seems important that a center such as the curriculum laboratory should free itself of such tasks as the cataloging and preparation of materials, so that more time can be given to the art and skill of production and construction of teaching materials and curriculum planning.

TABLE VII

THE RESPONSES OF CURRICULUM LABORATORY PERSONNEL AS IT RELATES TO WHERE MATERIALS HOLDINGS ARE PROCESSED

Item Examined	Yes	No	No Response
Are all curriculum materials processed in the curriculum laboratory?	187	97	19
	62%	32%	6%

TABLE VIII

THE NUMBER OF RESPONDING CURRICULUM LABORATORY PERSONNEL WHO USE THE DEWEY CLASSIFICATION SYSTEM IN THE CATALOGING OF ELEMENTARY AND SECONDARY TEXTBOOKS

Classification System	Yes	No	No Response
Do you give Dewey numbers to textbooks on the elementary and secondary levels?	63	227	13
	21%	75%	4%

Item 10

Item 10 asks the question: What system of cataloging and classifying is used in the processing of textbooks on the elementary and secondary levels? Table VIII shows the responses of curriculum laboratories that used the Dewey classification scheme. Data collected reveal the following: 63 or 21 per cent used the Dewey System; 27 or 75 per cent did not use the Dewey Sustem, although other schemes were used, as will be shown in Table IX. There were 13 or 4 per cent who did not respond to this item.

James asserts that using a classification system to group materials gives the clientele of the curriculum laboratory quick access to materials and makes prompt and effective services possible. She listed under textbooks the following information:

> Textbooks
>
> 1. Catalogued and classified according to the procedure used for professional books.
> 2. Catalogued and classified according to special system devised for the particular laboratory.
> 3. Uncatalogued but shelved according to subject, grade, or publisher, on the elementary and secondary levels.[56]

Table IX shows a variety of systems of classification used by curriculum laboratories. Data collected show the following: 16 or 7 per cent used Dewey Modified; 22 or 9.6 per cent used the Educational Laboratory Scheme; 144 or 63 per cent used Subject,

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[56] James, op. cit., pp. 90-91.

Grade Level and Publisher arrangement; 10 or 4.8 per cent used L.C.; 28 or 12 per cent used arrangements worked out by their state system; 8 or 3.6 per cent did not classify at all. These statistics show an explicit need or demand for more uniformity in the classification of textbooks on the elementary and secondary levels.

TABLE IX

THE NUMBER OF CURRICULUM LABORATORIES USING VARIOUS TYPES OF CLASSIFICATION SCHEMES FOR THEIR TEXTBOOKS

Classification Schemes Used by Curriculum Laboratories	Number Responding	Number not Responding	Percentage Responding
Dewey Modified	16		7
Educational Laboratory Scheme	22		9.6
Subject Area, Grade Level and Publisher	144		63
Other (L.C.) (State System) for Materials Center	10 28		4.8 12
Do Not Classify at All	8		3.6
Totals	228	103	100%
	68.9%	31.1%	

Other Names Given to the Curriculum Laboratory

A study of the current history of the curriculum laboratory reveals a wide range of names given to this facility. Although the questionnaire designed for this study did not seek names for this facility other than that of the curriculum laboratory, many respondents gave other names, as will be accounted for below:

TABLE X

OTHER NAMES GIVEN TO THE CURRICULUM LABORATORY BY PARTICIPATING INSTITUTIONS

Names	Number of Facilities
Area Curriculum Center	1
Curriculum Library	30
Curriculum Center	4
Curriculum Materials Center	5
Curriculum Materials Area	1
Educational Materials Center	4
Education Library	1
Instructional Aid Center	1
Instructional Materials Center	8
Instructional Resource Center	1
Instructional Materials Laboratory	1
Learning Resource Center	2
Materials Center	1
Total	60

This study shows 243 institutions whose facility was called the curriculum laboratory, while 60 institutions reported other names.

Reasons given by some of the respondents for the names given were: (1) the organization of all specialized centers on the campus made the curriculum laboratory a segment of a media center, and (2) the term *curriculum laboratory* tended to limit the scope of the holdings, services and personnel.

The implication just given is that the curriculum laboratory is a segment of a larger unit, a "Media Center" or "Multi Media Center." Krug suggests however that the term *curriculum laboratory* is fairly standardized and possibly should not be changed, but the terms, "Curriculum Study Center" and "Teaching Aids Center" seem to be more realistic and meaningful.[57]

Curriculum Laboratory Services

Listed below are some services taken from information supplied by some of the participating institutions:

1. The laboratory should be opened for service at least 40 hours per week, and should be adequately staffed to achieve its purpose.
2. Provide production services, so that students can perform numerous production tasks as (a) produce transparencies, (b) make charts, (c) construct posters, (d) make photographic and tape duplications, (e) make spirit duplications, (f) construct bulletin board displays, and (g) construct all types of lettering.
3. Serve as a convenient place for the examination of textbooks, reference works, curriculum guides, and other teaching aids.

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[57] Krug., *op. cit.*, p. 16.

4. Serve as a center for the compilation of up-to-date information on curriculum development.

5. Take advantage of existing opportunities and create new opportunities for faculty members to utilize instructional materials by means such as: demonstrations of effective use of new as well as older materials and equipment in college courses, informal faculty seminars, displays, and announcements of new acquisitions.

6. Serve as a display area for students' projects and educational exhibits prepared by professional organizations and other groups when appropriate.

7. Provide faculty and their students with previewing and auditioning facilities for films, filmstrips, recordings, tapes, and other audio-visual materials.

8. Provide a collection of professional books limited to those which are necessary in carrying out the consultive function of the center.

9. Give assistance to faculty through creative development and use of instructional materials, equipment, and methods to the end of achieving the purposes of the instructor.

10. Produce various publications which will be of help to teachers in the state, such as (1) mimeographed materials such as an elementary school textbook list, (2) a checklist of evaluative criteria for textbook selection, and (3) bibliographic reading list for professional up-keep.

11. Provide for study and research in the field of curriculum and instructional materials at the elementary and secondary levels.

12. Provide consultative services both to members of the college community and the state.

13. Work closely with state department of public instruction in the preparation and editing of state curriculum guides.

14. Answer questions or give information related to curriculum development and sources of instructional materials.

15. Provide internship opportunities for graduates who are preparing to become instructional materials specialists.

16. Assist the instructional staff in designing and producing materials required to meet specific local instructional needs.

17. Participate in the design of instructional systems, particularly with respect to the optimum fitting of appropriate media, new developments, techniques, and research findings.

18. Collaborate in the development of in-service training programs in elementary and secondary schools which seek to improve the selection and use of instructional materials and technology.

19. Conduct in-service educational activities and disseminate information to faculty regarding instructional media, new developments, techniques, and research findings.

20. Participate in teacher education programs designed to acquaint teachers with various media and their use in teaching.

The twenty service items listed above are the consensus of opinion of numerous educators and curriculum directors. It is essential that this section of this study be emphasized because it is through the avenues of service that the curriculum laboratory can show how it serves to improve the quality of teachers.

Policies

In order to achieve the purpose prescribed for the curriculum laboratory, it is necessary to have policies which should govern the day-to-day operation of the curriculum laboratory. Below is a list of suggested policies:

1. Extend service hours to entire college community, state, local schools, teachers and administrators.
2. Encourage suppliers to deposit and provide materials without charge.
3. Seek advice from staff on their needs before making purchases.
4. Refer students and teachers to other centers on campus for services that the curriculum laboratory does not give.
5. Make loan periods on materials on the basis of need and availability of materials.
6. Prevent unnecessary duplication of materials that are in other agencies on the campus.
7. Arrange hours to give the best services, not less than 40 hours per week.
8. Interpret the curriculum laboratory to the college community.

Suggested Holdings List

The holdings of a center can play an important part in creating those kinds of professional experiences that are essential to teacher preparation. This being true, it is necessary to compile an up-to-date list of items that could be a part of the holdings of a curriculum laboratory. The following is a composite list of exhaustive holdings for a curriculum laboratory:

Annual reports of school districts, including budgets

Audio tapes of taped lectures and addresses by outstanding educators

Bibliographies: films, filmstrips, tapes, e.g.

Bulletin Board Ideas Booklets

Caldecott and Newberry Award books

Children's catalog

Children's magazines

College catalogs

Community surveys

Courses of study

Curriculum bulletins

Diagrams

Dictionaries (elementary, junior, senior, college)

Dictionary of Education

Educational games and toys

Encyclopedia of Educational Research

Encyclopedias (World Book, Childcraft, The New Book of Knowledge, Comptons, e.g.)

Evaluations -- Schools, Colleges, and Universities (State, local and national)

Famous First Facts

Films (a few and well selected)

Film loops

Filmstrips

Flat pictures

Free and Inexpensive Materials

Guide to American Educational Directories

How-to-do-it materials (planning assembly programs, social activities, constructing teaching aids)

How to Locate Educational Information

Handbook of Research on Teaching

Indexes -- (Education Index, e.g.)

Laboratories -- Science, SRA Reading, Phonetic Learning Game Kit, Literature, e.g.

Language Masters

Letter Sets

Maps and globes

Materials and Instruction for Research

Mental Measurement Yearbooks

Micro-cards

Models (sex education, digestion, teeth, eyes, ears, e.g.)

More Junior Authors

Mounted materials, graphs, photos, e.g.

Newspapers (selected)

Occupational Briefs

Patterson's American Education

Popular magazines

Posters and charts

Professional books

Professional journals in the area of education

Professional periodicals in allied fields to education

Programmed texts and other programmed samples

Publishers catalogs

Rand McNally Handbook of Education

Readers for slow learners

Reading pacers

Realia

Records

Recordings

Reports and abstracts of research

Sample case studies and anecdotal records

Sample cumulative records

Sample Diaries

Sample field trip plans

Sample lesson plans

Sample handbooks for parents, students, administrators and teachers

Sample report cards and attendance forms

Sample resource units

Sample teaching units

Selected teacher-made tests

Senior High School Library Catalog

Slides

Standardized Test (samples)

Student produced teaching devices

Students' publications (yearbooks and newspapers)

Subject and Title Index to Short Stories for Children

Subject Index to Children's Plays

Tapes (educational)

Tests (sample of teacher-made tests)

Teacher's manuals

Textbooks (adopted and supplementary, K-12)

Textbook Publishers Catalogs

Three dimensional materials (models, radio, dioramas)

Tools for selection of printed materials, e.g., *Textbooks in Print*, *Subject Guide to Books in Print*, Vertical File Index, *and Test in Print*

Twentieth Century Authors

United Nations Yearbook

Video Tape

Workbooks

World Almanac

Yearbooks (professional -- Education)

Equipment:

Dry press mount

Filmstrip projectors

Duplicating machine or mimeographing machine

Filmstrip viewers

Listening post (with earphones)

Micro-projectors

Pressing iron (electric)

Readers for micro-cards

Record players (small for listening)

Reading pacers

Language masters

Screens

Teaching machines

Television

Turntables

Typewriters

Materials for Construction

Aluminum foil

Brown paper

Compass

Construction boards

Cord (different weights)

Corrugated boards or sheets

Crayons

Duplicating paper and stencil and fluid

Mimeograph paper

Paints (tempra, water, e.g.)

Paste (scotch, masking tape)

Pins (straight)

Rulers

Scissors

Squares

Stencils

Staplers

Stencils (alphabet and numbers) for lettering

Stylus pencils

Thumb tacks

Wax

Wax paper

CHAPTER V

SUMMARY

This study included 443 curriculum laboratories in teacher education institutions which are listed in the 1965-66 NCATE Annual Report. Organizational and administrative aspects of the curriculum laboratory in each institution were examined to ascertain factors that have direct bearing on the preparation of teachers.

Of the 443 institutions surveyed, 331 or 75 per cent responded to the questionnaire. Some important findings reported through the questionnaire are as follows:

1. Lines of authority were controlled by school or department of education; controlled by college or university library; and controlled jointly by the university or college library and the school or department of education.
2. Thirteen names were given other than the curriculum laboratory for this facility.
3. The staff and personnel ranged from 1-20 in number. The staff ranged from librarian to full professor. Some of the centers had a director, coordinator or supervisor, while most of them did not have this type of leadership to man their facility.
4. The service hours varied. They ranged from on request to self service; 1-39 hours to 100 plus. The hours most popular were 40-49 hours. The forty hours were most desirable and received the largest number of responses. Hours exceeding fifty nine were considered library hours, and the facility was located in the college or university library.
5. Holdings varied from one curriculum laboratory to the other. The questionnaire had a limited

sample holdings list, therefore, many personnel in responding curriculum laboratories listed other items that they have in their collection.

6. There were 73 or 24 per cent who considered their facility as a branch library, while 216 or 71 per cent did not, and 14 or 3 per cent did not respond to the item.

7. There were 62 per cent who processed their materials holdings in the curriculum laboratory, while 32 per cent did not, and 6 per cent did not respond to the item.

8. There were 63 or 21 per cent who assigned Dewey numbers to their elementary and secondary textbooks, while 227 or 75 per cent did not use this system, and 13 or 4 per cent did not respond to the item.

9. Classification schemes for textbooks on the elementary and secondary levels used by some of the curriculum laboratory personnel are as follows: (a) The Educational Laboratory Scheme, (b) Dewey Modified, (3) Subject, Area, Grade Level, and Publisher, (d) Do not classify at all, and (e) schemes worked out by individual state departments of education.

Information gathered from the questionnaire shows signs of what is commonly called the "Educational Revolution." Changes made in the curriculum laboratory, as indicated by the varying names given to this facility, types of personnel used to administer it, and varied holding patterns are signs that point to the future role of the curriculum laboratory.

A review of the literature focuses attention on changes and innovations in teacher education programs. This study brings together a body of information which describes educational changes which affect the preparation of teachers, and stresses the importance of changes made in teaching methods and practices. It points out the need for teacher education programs to up-date their curricula so that teachers will be prepared to meet current demands that are made on educators today.

In proper perspective with innovation in teacher education, the curriculum laboratory must also make some changes. It must (1) expand its quarters to accommodate all types of materials that aid teaching and learning, (2) employ a well qualified staff to administer the necessary services, (3) provide control that will adequately support the curriculum laboratory, (4) re-define its goals, (5) innovate its holdings, (6) extend its services, and (7) join other agencies on the college or university campus in putting together packages, which will promote better teaching and learning on all levels of education.

This study could serve as a guide to those who have unanswered questions as it relates to the need for such a facility in the preparation of teachers. On the basis of findings in this study those who are responsible for the curriculum laboratory may be better able to staff it, and regulate the necessary service hours, build its collection, and provide better service. A manual of procedures for processing of book and non-book materials is included. A bibliography of related readings, and a resource list and purchasing guide are included to aid those who wish to develop their collection. Finally, it is hoped that this study will add to the body of research in teacher training that currently exists.

RECOMMENDATIONS

This study has pointed out specifics with relationship to the curriculum laboratory and its future. On the basis of the findings, I make the following recommendations:

1. that the quarters of the curriculum laboratory be expanded to accommodate all types of materials that aid teaching and learning;

2. that a well qualified staff be employed to render the necessary services;

3. that proper control be provided that will insure adequate financial support;

4. that administrative staff constantly evaluate services and up-date the aims and objectives in light of the changes and demands made by teacher education programs;

5. that the holdings be innovated to keep in line with change in teacher education programs;

6. that the curriculum laboratory join other agencies on the college or university campus in putting together packages, which will promote better teaching and learning on all levels of education;

7. that the staff and personnel of the curriculum laboratory promote and accelerate the laboratory aspect of this facility;

8. that this facility function as a part of a larger unit;

9. that research on the problems in teacher education be encouraged through the resources of the curriculum laboratory;

10. that the pursuit of excellence in teacher preparation be supported by the wide and varied assortment of enrichment materials found in the curriculum laboratory;

11. that teacher educators involve themselves in the types of classroom instruction which will require student teachers to be exposed to all kinds of teaching materials; and

12. that the curriculum laboratory operate as an integral part of the teacher education program and not an appendage to it.

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APPENDIX

A LIST OF INSTITUTIONS ACCREDITED BY NCATE, BY STATES, WHO PARTICIPATED IN THIS STUDY

Alabama

Birmingham-Southern
Florence State College
Howard College
Jacksonville State College
Troy State College
University of Alabama

Arizona

Arizona State College
Arizona State University
University of Arizona

Arkansas

Agricultural, Mechanical, and Normal College
Arkansas A and M College
Arkansas State College
Harding College
Ouachita Baptist College
Southern State College
University of Arkansas

California

California State College at Long Beach
California State College at Los Angeles
Chico State College
Immaculate Heart College
Sacramento State College
San Diego State College
San Francisco State College
Stanford University
University of the Pacific
San Jose State College

Colorado

Colorado State College
Loretto Heights College
University of Colorado
University of Denver
Western State College
Colorado State University

Connecticut

Central Connecticut State College
Danbury State College
Southern Connecticut State College
University of Connecticut
University of Hartford
Willimantic State College

District of Columbia

Gallaudet College
George Washington University

Florida

Florida Agricultural and Mechanical University
Florida State University
University of Miami

Georgia

Albany State College
Emory University
Georgia Southern College
Mercer University
Valdosta State College
Wesleyan College
Women's College of Georgia

Idaho

Idaho State University
University of Idaho

Illinois

Augustana College
Bradley University
Chicago Teachers College
Concordia Teachers College
DePauw University
Greenville College
Illinois State
Illinois Wesleyan University
National College of Education
Northern Illinois University
Olivet Nazarene College
Southern Illinois University
Western Illinois University

Indiana

Anderson College
Ball State College
Butler University
Evansville College
Franklin College of Indiana
Goshen College
Indiana State College
Indiana University
Manchester College
Saint Mary's College
Taylor University

Iowa

Clark College
Cornell College
Luther College
Marycrest College
Iowa Wesleyan College
Morningside College
State College of Iowa
University of Dubuque
Wortburg College
William Penn College

Kansas

Bethany College
Bethel College
Fort Hays Kansas State College
Friends University
Kansas College of Pittsburg
Kansas State University
Marymount College
Saint Mary College
University of Kansas
Washburn University of Topeka
Wichita State University

Kentucky

Asbury College
Berea College
Eastern Kentucky State
Kentucky State College
Murrey State College
University of Kentucky
University of Louisville
Western Kentucky State College

Louisiana

Grambling College
Louisiana College
Louisiana Polytechnic Institute
Louisiana State Agricultural
  and Mechanical College
Loyola University of the South
Northeast Louisiana State College
Northwestern State College of
  Louisiana
Southeastern Louisiana College
University of Southwestern
  Louisiana

Maine

Farmington State Teachers College
Gorham State Teachers College
University of Maine

Maryland

Frostburg State College
Salisbury State College
Towson State College

Massachusetts

Boston College
Boston University
Leslay College
Springfield College
State College, Bridgewater
State College, Fitchburg
State College, Farmingham
State College, North Adams
State College, Worcester
University of Massachusetts
Wheelock College

Michigan

Albion College
Alma College
Calvin College
Central Michigan University
Hope College
Michigan State University
Northern Michigan University
University of Michigan
Western Michigan University

Minnesota

Augsburg College
Carleton College
College of St. Catherine
College of St. Teresa
College of St. Thomas
Gustavus Adolphus College
Hamline University
Macalester College
Moorhead State College
St. Cloud State College
St. Olaf College
University of Minnesota
University of Minnesota-Duluth
Winona State College

Mississippi

Delta State College
University of Mississippi
University of Southern Mississippi

Missouri

Central Missouri College
Drury College
Fountbonne College
Harris Teachers College
Northwest Missouri State College
Saint Louis University
Southeast Missouri State College
University of Missouri at Kansas City

Montana

Eastern Montana College of Education
Montana State College
Montana State University
Western Montana College of Education

Nebraska

Chadron State College
Concordia Teachers College
Craighton University
Harding College
Midland College
Municipal University of Omaha
Nebraska Wesleyan University
Peru State College
Union College
University of Nebraska
Wayne State College

Nevada

University of Nevada

New Hampshire

Keene State College
Plymouth State College

New Jersey

Glassboro State College
Jersey City State College
Montclair State College
Rutgers, The State University

New Mexico

Eastern New Mexico University
New Mexico State University
University of New Mexico
Western New Mexico University

New York

Hunter College
Queens College
Columbia University
Cornell University
Hofstra University
New York University
State University of New York:
  College at Brockport
  College at Cortland
  College at Geneseo
  College at New Paltz
  College at Oswego
  College at Plattsburgh
  College at Potsdam
State University of New York at Albany
State University of New York at Buffalo

North Carolina

Appalachian State Teachers College
East Carolina College
Elizabeth City State College
West Carolina College

North Dakota

Dickerson State College
Maryville State College
Valley City State College

Ohio

Bowling Green State University
Central State College
Hiram College
John Carroll University
Kent State University
Miami University
Ohio State University
Otterbein College
Saint John College of Cleveland
University of Dayton
University of Toledo
Wilmington College
Wittenberg University

Okalahoma

Central State College
Northwestern State College
Oklahoma College for Women
Oklahoma State University
Panhandle Agricultural and Mechanical College
Southwestern State College
University of Oklahoma

Oregon

Eastern Oregon College
Lewis and Clark College
Mary Hurst College
Oregon State University
Portland State College
Southern Oregon College
University of Oregon

Pennsylvania

Bloomsburg State College
Cheyney State College
Clarion State College
Edinboro State College
Indiana State College
King's College
Kutztown State College
Lock Haven State College
Mansfield State College
Marywood College
Millersville State College
Muhlenberg College
Pennsylvania State University
Shippensburg State College
University of Pennsylvania
Westchester State College

Rhode Island

Rhode Island College

South Dakota

Augustana College
Black Hills State College
General Beadel State Teachers College
South Dakota State College
Southern State College
State University of South Dakota

Tennessee

Austin Peay State College
Carson Newman College
East Tennessee State University
George Peabody College for Teachers
Memphis State University
Middle Tennessee State College
Tennessee Agricultural and Industrial State University
Tennessee Polytechnic Institute
University of Tennessee

Texas

Abline Christian College
East Texas State College
Hardin Simmons University
Incarnate Word College
Prairie View Agricultural and Mechanical College
Southern Methodist University
Texas Christian University
Texas College of Arts and Industries
Texas Southern University
Texas Technological College
Texas Women's University
Trinity University
University of Houston

Utah

Brigham Young University
University of Utah
Utah State University

Vermont

University of Vermont

Virginia

Longwood College
Madison College
Redford College, Women's Division of Virginia Polytechnic Institute
University of Virginia
Virginia State College

Washington

Central Washington State College
Eastern Washington State College
Fort Wright College of the Holy Names
Seattle Pacific College
Western Washington State College

Wisconsin

Alverno College
Cardinal Stritch College
Carroll College
Edgewood College of the Sacred Heart
Holy Family College
Marquette University
Mount Mary College
St. Norbert College
Stout State University
University of Wisconsin
Viterbo College
Wisconsin State University - La Crosse
Wisconsin State University - Oshkosh
Wisconsin State University and Institute of Technology, Platteville
Wisconsin State University - River Falls
Wisconsin State University - Stevens Point
Wisconsin State University - Superior
Wisconsin State University - Whitewater

QUESTIONNAIRE

This questionnaire was designed to support a research project which will attempt to establish the need for a curriculum laboratory in connection with the training of pre-service and in-service teachers through the examination of organizational and administrative aspects of the curriculum laboratory to ascertain information that has direct bearing on the preparation of teachers. It also purposes to show what the holdings should consist of and what methods others have used to prepare their materials holdings.

1. Does this institution have a curriculum laboratory? Yes__ No__
2. Does the curriculum laboratory operate directly under the school of education? Yes__ No__
3. If the answer to question number two is "No," where does the authority originate? ______________________________
4. How many members are on your staff? _____
5. What rank does each staff member have? ____________________ ____________________ ____________________
6. How many hours per week does the curriculum laboratory offer services? _____
7. Below is a list of materials that could be the holdings of a curriculum laboratory. Check the materials which your laboratory houses with an X. Check the materials not in your laboratory, but elsewhere on the campus with an O.

Books:

Children ___
Adolescent ___
Textbooks ___
Manuals ___
Workbooks ___
Courses of study ___

Periodicals:

Children's ___
Professional ___
General ___

Pamphlets ___
Maps ___
Posters ___
Pictures ___
Test & Measurements ___
Charts ___
Diagrams ___
Catalogs ___
College bulletins ___
Letter sets ___
Newspapers ___
Units (commercial & student prepared) ___
Toys and games ___
Films ___
Filmstrips ___
Records, transcriptions ___
Educational tapes ___
Realia ___
Free and inexpensive learning materials ___

Equipment:

Projectors ___
Screens ___
Readers for Micro Cards ___
Listening Post ___
Turntables ___
Filmstrip Viewer ___

8. Is the curriculum laboratory considered a branch library? Yes__ . No__

9. Are all materials processed in the curriculum laboratory? Yes__ No__

10. Do you give Dewey Numbers to textbooks on the elementary and secondary levels? Yes__ No__

11. If the answer to question number ten is "No," check the item below which best describes your classification scheme.

Educational Laboratory ___
Dewey Modified ___
Subject area, Grade levels and Publisher ___

12. If you do not have a curriculum laboratory operating within the framework described in this questionnaire, what agencies in the educational program offer this kind of service?

    a.

    b.

    c.

    d.

    e.

    f.

    g.

Remarks:

A MANUAL OF PROCEDURES FOR PROCESSING OF BOOK AND NON-BOOK MATERIALS IN CURRICULUM CENTERS

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CHAPTER I

PURPOSE OF THE MANUAL

This manual has been prepared for use by staff and personnel of curriculum centers on elementary, secondary, college or university levels. It provides an assortment of methods that can be used in the processing of materials both print and non-print. It is hoped that concerned persons can and will select the particular samples which best suit their individual need. This manual was constructed from information found in journals and manuals of materials centers and laboratories. This manual might prove most helpful to those centers that do not have the services of a librarian.

It is generally agreed that materials give the best quality of service when they are properly cataloged, processed, arranged, and made accessible.

In view of the fact that many instructional materials centers do not have a trained librarian in charge of processing book and non-book materials, it is necessary to bring together a body of information that will help those persons. It is hoped that librarians who wish to up-date their present methods and revise their manual will find this manual helpful.

The complex problem of cataloging instructional materials is growing in importance and difficulty, due to the rapid multiplication of educational media. The pace is set by the National Defense Education and Elementary and Secondary Education Act. Many schools are acquiring large quantities of non-book materials. These materials must be easy to locate and available to teachers and students. A system capable of meeting these needs is in demand.

CHAPTER II

CLASSIFICATION SCHEMES

R. R. Bowker Scheme

The arrangement used in *Annual Textbooks in Print* by R. R. Bowker Company could be developed and used in any materials center. *Annual Textbooks in Print* list textbooks on the following levels: elementary, secondary, and professional. All subject areas are listed and are identified by a number. This number scheme provides an excellent framework for the classification of both book and non-book materials. This classification arrangement is listed as follows:

Classification list

Class Number	Subject Area
	ART
1.	Art Appreciation
2.	Drawing
3.	Handicraft
4.	History of Art
	AUDIO-VISUAL
5.	Audio-Visual
	BUSINESS
6.	Accounting, Bookkeeping
7.	Advertising
8.	Business English
9.	Business Law

Class Number	Subject Area
	BUSINESS Cont'd
10.	Business Mathematics
11.	Business Training Management
12.	Retailing, Salesmanship
13.	Shorthand, Typing
	DICTIONARIES/ENCYCLOPEDIAS
14.	Dictionaries, Encyclopedias
	GUIDANCE
15.	Guidance
15-1	Guidance Stories
16.	Occupational, Educational Information
17.	Personality Development
	HEALTH AND PHYSICAL EDUCATION
18.	Drivers' Education
19.	Health and Hygiene
19-1	Health Stories
20.	Physical Education, Recreation and Dance
21.	Safety
22.	Sports
	HOME ECONOMICS
23.	Child Care and Development
24.	Consumer Problems
25.	Clothing and Fabrics
26.	Food and Nutrition
27.	Homemaking, Marriage
	LANGUAGE ARTS
28.	Composition, Creative Writing
29.	English

Class Number	Subject Area
	LANGUAGE ARTS Cont'd
30.	Handwriting
31.	Journalism
32.	Language
33.	Library Guidance
34.	Literature
34-1	Classics
34-2	Poetry, Poets
34-3	Stories
34-4	Authors
34-5	Heroes
	PARLIAMENTARY PROCEDURES
35.	Parliamentary Procedures
	READERS, BASAL
36.	Reading Readiness
37.	Programmed Reading Materials
38.	Reading Skills, Remedial, Phonics
39.	Speech
40.	Spelling
	MODERN LANGUAGES
41.	Modern Language
42.	Chinese
43.	French
44.	German
45.	Greek
46.	Hebrew
47.	Italian
48.	Japanese
49.	Latin
50.	Portuguese
51.	Russian
52.	Spanish
53.	Other Languages

Class Number	Subject Area
	MATHEMATICS
54.	Algebra
55.	Arithmetic
56.	General Mathematics
57.	Geometry
58.	Integrated Mathematics
59.	Modern Mathematics
60.	Trigonometry
	MUSIC
61.	Music
61-1	Appreciation
61-2	Classical
61-3	Folk Music
61-4	Musical Comedy
61-5	Jazz
61-6	Seasonal
61-7	Religious
61-8	Miscellaneous
	PLAYS AND PRODUCTIONS
63.	Plays and Productions
	PROFESSIONAL BOOKS FOR TEACHERS
64.	Administration
65.	Arts and Crafts
66.	Audio-Visual Material
67.	Dictionaries and Encyclopedias
68.	Education
69.	Foreign Languages
71.	Guidance
72.	Health and Hygiene
73.	Industrial Arts
74.	Kindergarten and Nursery Books
75.	Language and Literature
76.	Library Work
77.	Mathematics and Statistics
78.	Music
79.	Parental Education

Class Number	Subject Area
	PROFESSIONAL BOOKS FOR TEACHERS Cont'd
80.	Psychology and Philosophy
81.	Reading
82.	Recreation and Dance
83.	Religion
84.	Social Studies
85.	Speech
86.	Spelling
88.	Vocational Education
	RELIGIOUS EDUCATION
89.	Religious Education
89-1	Commandments
89-2	Life of Christ
89-3	Old Testament
89-4	New Testament
89-5	Sacraments
	SCIENCE
90.	Aeronautics and Space Study
91.	Astronomy
92.	Biology
93.	Chemistry
94.	General Science
95.	Nature Study
96.	Physical Science
97.	Physics
98.	Radio, Radar, Electronics, TV
99.	Zoology
100.	Geology
	SOCIAL STUDIES
101	Social Studies
102	Civics, Citizenship, Government
103	Contemporary Problems
104	Economics
105	Geography
105-1	Africa
105-2	Arctic, Antarctic
105-3	Asia

Class Number	Subject Area
	SOCIAL STUDIES Cont'd
105-4	Australia
105-5	Canada
105-6	Central America
105-7	Europe
105-8	North America
105-9	South America
105-10	Tropical America
105-11	United States
105-12	West Indies
105-13	Natural Resources, Conservation
105-14	Desert
105-15	Prairie
106	Maps
	HISTORY
107	History
108	State
109	Ancient and Medieval
110	Canada
111	Far East
112	Latin America
113	Modern Europe
114	World
115	International Relations
116	Psychology
117	Sociology
118	Biography
119	Testing
120	Education
132	Games
133	Activities
167	Home Economics
197	Physical Education

Extension of classification numbers. The R. R. Bowker System is expandable to any new materials acquired. Variations can be easily made in it. For example, the classification number 15 indicates guidance. All material relative to guidance regardless to the type should be classified under the number 15. In this system 105 indicates geography. By adding numbers to this base number, one can easily distinguish continents and regions. These designations have proved very helpful in an area in which there are many materials.

Example:	105	Geography
	105-1.	Africa
	105-2.	Arctic, Antarctic
	105-3.	Asia
	105-4.	Australia
	105-5.	Canada

Arrangement for a media kit. A media or materials kit on Egypt would be classified under 105-1. The *MK* over the classification number tells the type of materials, 105-1 the classification of the material. A patron using the card catalog would look behind the guide card marked 105-1 Africa, then proceed alphabetically until Egypt is located. The number 106-1 would be given to an African map. (106 - maps and 1 - Africa)

Cataloging codes for non-book materials. The following table explains the code for non-book materials for users of the card catalog. This table should be posted in a prominent place near the card catalog.

Non-Book Materials	Codes	Card Color Bands		
Filmstrips	FS	Orange-Banded	Card	
Records	RC	Green	"	"
Media Kit	MK	Black	"	"
Teaching Aids	TA	Red	"	"
Charts	CH	Brown	"	"
Overhead	OH	Blue	"	"
Cartridges	CS	Yellow	"	"

A sample card for a filmstrip. The number 55 represents arithmetic in *Textbooks in Print*. It represents all types of materials in arithmetic, such as filmstrips, transparencies, charts, recordings, etc.

Example:

Filmstrip------------FS   Adding with fractions.
Classi-   Middle Grades   Color 42 frames
fication-------------55
Accession No.--------36

Sample Card for a Filmstrip

Sample Call Numbers for Selected Non-Book Materials

Area   Arithmetic   Number (Class   55   (R. R. Bowker)

OVERHEAD

OH	Code
55	Class Number
3	Accession Number

Blue-banded card for the card catalog

CHART
CH
55
16

Brown-banded card for the card catalog

RECORD
RC
55
36

Green-banded card for the card catalog

A Sample Holdings Card

Materials available in the
Curriculum Laboratory

SUBJECT: Social Studies
TOPIC: Switzerland
GRADE LEVEL: Intermediate
CLASSIFICATION NO.: 105-7

	YES	NO
OUTLINE:	X	
Texts:		X
Filmstrip:		X
Charts:	X	
Films:		
Cartridges:		
Teaching Aids:	X	
Material Kits:	X	
Records:	X	
Transparencies:	X	
Models: Vertical File	X	
Other:		

Multi-Media Card

Courtland Teaching Materials Center Scheme*

Sample Cards for Elementary and Secondary Textbooks

Textbook
Dewey Number
Cutter Number
Grade Levels

T501
G434s
G. 1-8

Ginn and Company. Science
Craige, Gerald S.
Science Today and Tomorrow Series, by Gerald S. Craig and Others. Ginn, Boston, 1958.

IMC Has:

Prim. Science and You	M T W
Gr. 1 Science Near You	M T W
Gr. 2 Science Around You	M T W
Gr. 3 Science Everywhere	M T W
Gr. 4 Discovering with Science	M T W

see card 2

T501
G434s
G. 1-8

Ginn and Company Series
Craig, Gerald S.
Science Today and Tomorrow Series . . . (card 2)

Gr. 7 Learning with Science	M T W
Gr. 8 Facing Tomorrow With Science	M T W

1. Science. Textbooks, Elementary Schools. 2. Science Today and Tomorrow Series II. Ginn and Company. Science.

M--Manual; T--Textbook; W--Workbook

*Adopted from Courtland's Teaching Materials Center of the College of Education, Courtland, New York.

Feirer, John L.
Industrial Arts and Woodworking. Revised Edition. Peoria, Charles A. Bennett Co., Inc. Publishers, 1960.

1. Industrial Arts -- Woodworking
2. Title

Adopted 1960
Grades 7-12

INDUSTRIAL ARTS-WOODWORKING

Feirer, John L.
Industrial Arts-Woodworking. Revised edition, Peoria, Charles A. Bennett Co., Inc. Publishers, 1960.

1. Industrial Arts -- Woodworking
2. Title

Adopted 1960
Grades 7-12

Suggested Ways to Catalog Elementary and Secondary School Textbooks

R36

Van Roekel, et.al.
Harper & Row Basic Reading Program.
New York, Harper & Row, 1966.

CL Has:

1.	On Our Way to Read	Readiness Wkbk
2.	Janet and Mark	Preprimer wkbk Dupl. Master Phonics Cards
3.	Outdoors and In	Preprimer wkbk
4.	City Days, City Ways	Preprimer wkbk

continued

5.	Just For Fun	Preprimer	wkbk
6.	Around the Corner	Primer	wkbk
7.	Real and Make Believe	Gr. 1	wkbk
8.	From Elephants to Eskimos	Gr. 1	wkbk
9.	All Through the Year	Gr. 2	wkbk
10.	From Fins to Feathers	Gr. 2	wkbk
11.	From Far Away Places	Gr. 3	wkbk
12.	From Bicycles to Bommerings	Gr. 3	wkbk
13.	Trade Winds	Gr. 4	wkbk
14.	Crossroads	Gr. 5	wkbk
15.	Seven Seas	Gr. 6	wkbk

Adopted 1966
Te. Editions included

-2-

(R. R. Bowker, Textbooks in Print)
36 -- Language Arts
R -- Reading

HARPER-ROW BASIC READING PROGRAM 1966

R 36

Van Roekel, et.al.
Harper & Row Basic Reading Program.
New York, Harper & Row, 1966.

Adopted 1966
Grades Preprimer - 6th
Te. Editions and Workbooks included.

Series Entry Card

Classification Symbols:
- R -- Reading
- 36 -- Class Number taken from Textbooks in Print. (R. R. Bowker)

CHAPTER III

METHODS OF PROCESSING NON-BOOK MATERIALS

Filmstrips

Filmstrips have become increasingly valuable and one of the most popular teaching aids during the past years.

What is a filmstrip? Educators have defined the filmstrip several ways, however, the description given by Cox is thorough and satisfactory.

> Filmstrips are composed of a series of still pictures and titles or captions placed in sequential order on 35mm film from 2 to 6 feet long with sprocket holes on each side. They are commonly between twenty and fifty frames (individual pictures) in length, although they may be as long as 100 frames. Filmstrips are produced in black and white or color. . . . Most filmstrips are produced in 'single-frame' size, with each individual frame 3/4 inches high and 1 inch wide across the 35mm width of the film.[1]

Sound filmstrips. A filmstrip accompanied by some form of recorded narration is called a sound filmstrip. The narration may be on tape recordings or discs. These narrations discuss each frame of the filmstrip. A signal or sound indicates to the projectionist when to move to the next frame.

---

[1] Carl T. Cox, "Filmstrips Selection, Evaluation, Cataloging, Processing," *Wilson Library Bulletin*, 38:178, October, 1963.

Educators have suggested that there is strength in the filmstrip that has not been found in other devices. Cross and Cypher list the following advantages of filmstrips:

> 1. Make possible the showing of pictures at a rate of speed of projection controlled by the projectionist and adjustable to individual group needs.
>
> 2. Provide projectables that are easy to handle . . . easy to store, always ready to use.
>
> 3. Provide projectable materials arranged in sequence for showing.
>
> 4. Provide a visual or pictorial medium which can be adopted to use by individual, small groups or very large audiences.
>
> 5. Provide a good source of projectable materials at low cost.
>
> 6. Provide materials which can be projected effectively in a room which is only partially darkened. . . .
>
> 7. Provide material to suit a very wide range of instructional needs because of their low cost and the fact that many procedures have made filmstrips in virtually every subject area.[2]

---

[2] A. Cross, J. Foy and I. F. Cypher, Audio-Visual Education (New York: Thomas Y. Crowell, Inc., 1961), p. 77.

3

Audio-visual journals list new releases and review new titles of filmstrips. The following professional periodicals list titles of new filmstrips: *The English Journal*, *Grade Teacher*, *Journal of Health-Physical Education and Recreation*, *The Science Teacher*, *Social Education*, and *Social Studies*. Catalogs from producers and distributors are inexpensive and indispensable selection aids. The curriculum laboratory should have a file of these available sources for faculty and student use.

Cataloging procedures for filmstrips. Personnel in materials centers or curriculum laboratories who use the procedure or system as described below for cataloging filmstrips may adopt the rule to fit their local situation, however, it is recommended that the basic form not be changed.

Basic Form:*

Grade Level
Call No.

Title (filmstrip) Sponsor-Producer, Date.
Physical description (Series title)

No.
Notes.
Summary:
Added Entries

***Wilson Library Bulletin*, October, 1963, p. 180.

Rules for cataloging filmstrips.

Rule 1. Call Number -- The call number shall consist of the letters FS followed by the accession number.

Example: FS 17

Rule 2. Grade Level -- The grade level of the filmstrip shall appear on each catalog card in the upper right hand corner. The symbols used shall be:

p -- primary (K-3)
el -- elementary (4-6)
jh -- junior high (7-9)
sh -- high school (10-12)
c -- college
a -- adult

If a filmstrip is usable in more than one of the above grade levels, include all appropriate symbols. The symbols should be separated by a dash as:

el - jh - sh

Rule 3. Title (Filmstrip) -- The filmstrip title shall serve as main entry. The titles should be taken from the first frame of the filmstrip, not the filmstrip container or leader. Immediately following the title and enclosed within parentheses, the term "Filmstrip" is given.

Example: Looking forward to high school (filmstrip)
Three routes to Eldorado (filmstrip)
The wonders of paints (filmstrip)

Subtitles are considered as a part of the title and are included as part of the main entry.

Rule 4. Sponsor -- For sponsored filmstrips, the name of the sponsoring agency is given. Sponsored filmstrips are free or greatly reduced would appear as:

The wonders of paint (filmstrip) National Paint and Lacquer Association.

Rule 5. Producer and Date--
The name of the producing firm and the production date are given. The date given on the second or third frame. If no date is available, use "n. d."

Entries to this point would appear as:

The American scene (filmstrip) Encyclopedia Britannica Films, 1950.

Information from satellites (filmstrip) Films for Education, 1955.

The wonders of paints (filmstrip) National Paint and Lacquer Association. Eye Gate House, 1959.

Rule 6. Physical Description --
The physical description shall consist of three items:

1. Number of frames
2. Color of strip
3. Size in millimeters

A silent filmstrip could be described as:

54 fr., color, 35mm.
37 fr., b/w, 35 mm.

For sound filmstrip, add "sound" and the speed of the record or tape to the physical description. Sound filmstrips should be described as:

55 fr., color, 35mm. Sound,
  33-1/3 rpm record
42 fr., color, 35mm. Sound,
  7-1/2 imp - tape

Abbreviations used in the physical description are:

b/w	black and white
mm	millimeters
fr.	frames
rpm	revolutions per minute
ipm	inches per minute (tape recording)

Rule 7. Series Titles -- If the filmstrip is part of a series, the series title is enclosed in parentheses following the physical description.

Example: 31 fr., color 35mm. (Safety Series)

Rule 8. Notes ---- Notes may be included as deemed necessary by the cataloger. When applicable, the following should be noted as:

A. Teacher's guides should be noted as:

With teacher's guide

B. Call number of the accompanying record or tape as:

For sound use R35.
For sound use T98.

This note assumes the record and tape call number will be assigned in the same manner as filmstrip call numbers. This note can be typed on L.C. Cards when necessary.

C. The fact that a filmstrip is based on a book, motion picture or some other source should be included in a note on the catalog card. This may be given in summary (Rule 9) if desired.

Rule 9. Summary -- A brief summary is given to enable the prospective user to make a tentative selection prior to the preview. Summary may be written by the cataloger or may be taken from Filmstrip Guide, Educators Guide to Free Filmstrips, Library of Congress Cards, catalogs or the teacher's guide.

When the summary is quoted from a printed source, credit should be given. The following symbols can be used for more common sources:

FG	Filmstrip Guide
EGFF	Educators Guide to Free Filmstrips
LC	Library
LC	Library of Congress Cards
Guide	Teacher's Guide to the Filmstrip

Rule 10. Added Entries --

Added entries should be made for the following:

Subjects -- Use as many subject entries as necessary to assure maximum use of the filmstrip. The subjects should be selected from the same source as used for book and other non-book materials.[3]

---

[3] Cox, *op*. *cit*., pp. 180-181.

Processing procedures. Below are suggested steps for processing filmstrips, their accompanying guides and records:

Step 1 -- Mark the container and filmstrip
Step 2 -- Mark and file teacher's guide
Step 3 -- Mark and file record.

Container and filmstrip. Mark the accession number on both the filmstrip and its container. Place the accession number directly on the filmstrip label or print it on a pressure sensitive label. Apply the label to the top or the bottom of the container (can). Black india ink or any permanent ink should be used.

The accession number can be placed on the leader of the filmstrip. Use white photographer's ink on the dark surface of the filmstrip. This will help to identify the filmstrip in case the filmstrip is returned without the container or the pressure label. Any type of ownership signal dart can be used if desired.

Teacher's guides. Identify the teacher's guide with the number used on the filmstrip. File teacher's guide on manuals, by call number, near storage cabinet for filmstrips. Suggested methods for treatment of teacher's guides are as follows:

1. Write filmstrip call number on the guide in pencil.

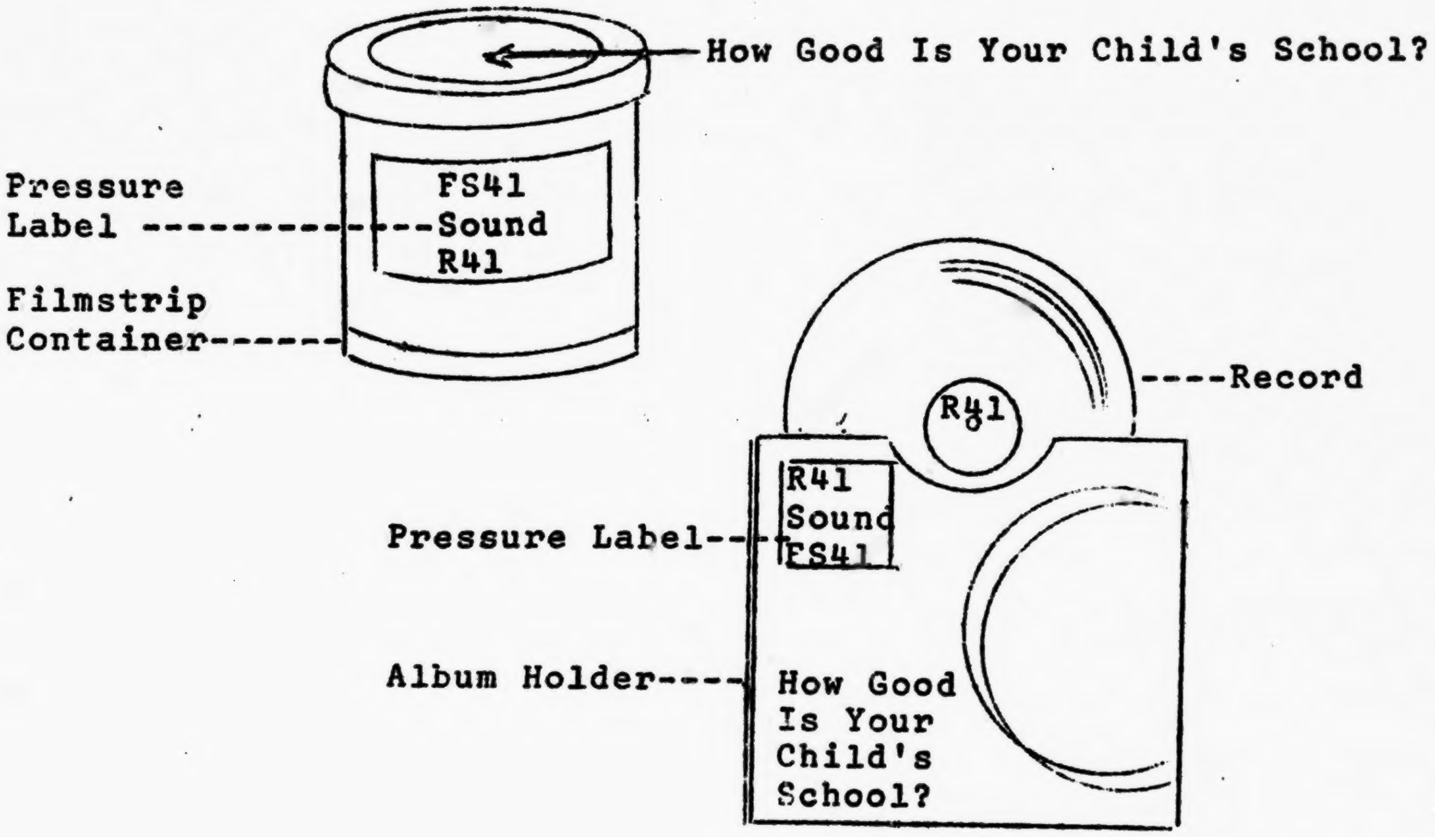
2. Paste guide in a folder. Print or write call number on the tab of folder.

3. Call number should be written as, "Guide FS38." (This will facilitate filing.)

Sound filmstrips.

The sound filmstrip, its container and its guide should be treated the same as silent filmstrip. In addition, a label should be placed on the side of the container to refer the user to the accompanying record, and a label on the record should identify it as the sound for the filmstrip.[4]

See illustrations below.


How Good Is Your Child's School?
Pressure Label
FS41
Sound
R41
Filmstrip Container
Record
R41
R41
Sound
FS41
Pressure Label
Album Holder
How Good Is Your Child's School?

---

[4] Ibid., p. 182.

Film Loops

The film loop often has the following names: "brief film," "cartridge film," "loop film," or "loops." These films are short. They are known as the single concept films, because they foster only one concept.

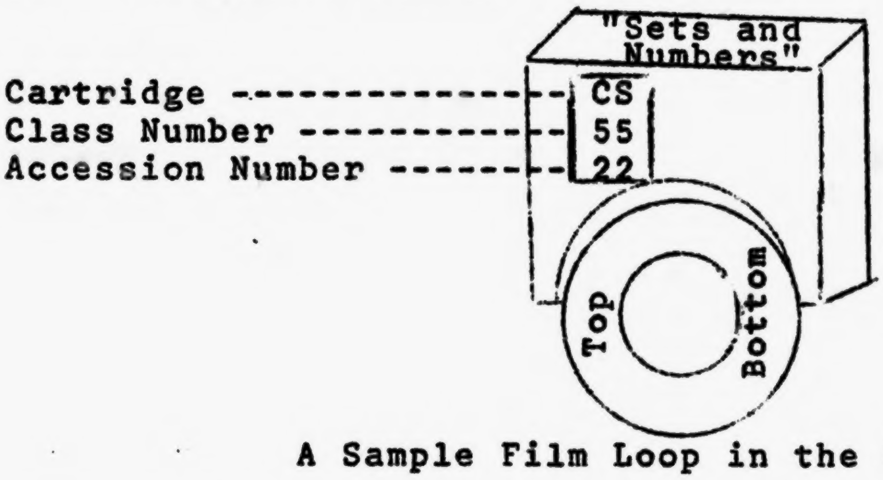
Sister Camilla states:

> The briefness of the single-concept film is one of its major advantages. The shortness necessitates elimination of all non-essential details, including introduction and recapitulation. This produces a film which is not an interruption, but an integral part of the instruction.[5]

The film loop may be treated the same as filmstrip and film. Use the symbol CS (cartridges), select a specific color-band for it.

Cartridge Yellow

CS
55 -- Mathematics
22 -- Accession Number



A Sample Film Loop in the Cartridge

---

[5] Sister M. Camilla, "Single Concept Film Loops," Catholic School Journal, 68:474, October, 1968.

Records

Place the main entry for a single recording under composer or author. The tracing, for books, should be given on the reverse side of the main entry card. The call number is made up of the accession number plus the letter, R, e.g. R101. Include the following information on cards: call number, composer or author, title, company, record, number, date of production, 1 record, 2 sides, size of record, speed of playing. Enter the date obtained, source, and price on the shelf list card. See example below.

Sample cards for a single recording:

EJ------- Junior
High
-------Elementary

R101

Longfellow, Henry Wadsworth, 1807-82.
Paul Revere's Ride. Popular Science
Monthly

Studiodisc C107-A, N.D.

1 record. 2 sides. 12". 78 rpm

1/12/68 Popular Science Monthly $2.00

Shelf List Card

EJ

Accession--R101
Number

Paul Revere's Ride.
Longfellow, Henry Wadsworth, 1820-82.

Paul Revere's Ride. Popular Science Monthly.

Studiodisc C107-A, n.d.

1 record. 2 sides. 12". 78rpm

Title Card

EJ

R101

REVERE, PAUL, 1735-1818.
Longfellow, Henry Wadsworth, 1807-82.

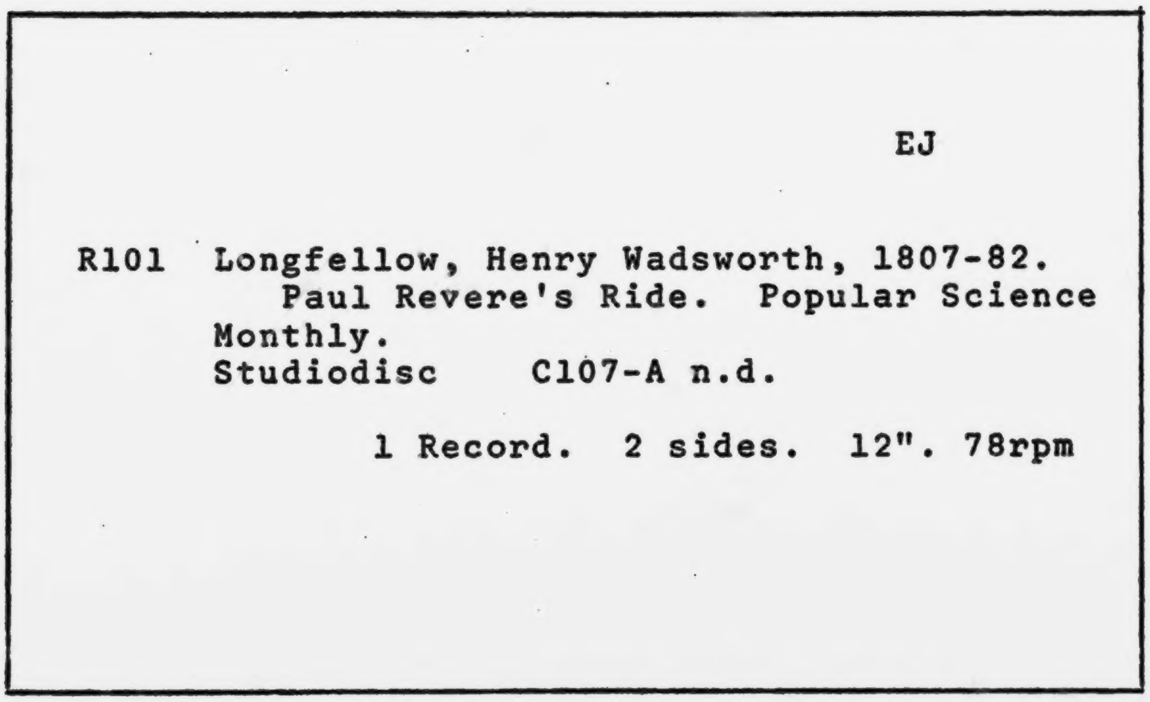
Paul Revere's Ride. Popular Science Monthly

Studiodisc C107-A, n.d.

1 record. 2 sides. 12". 78 rpm.

Subject Card

Main Entry or Author Card*

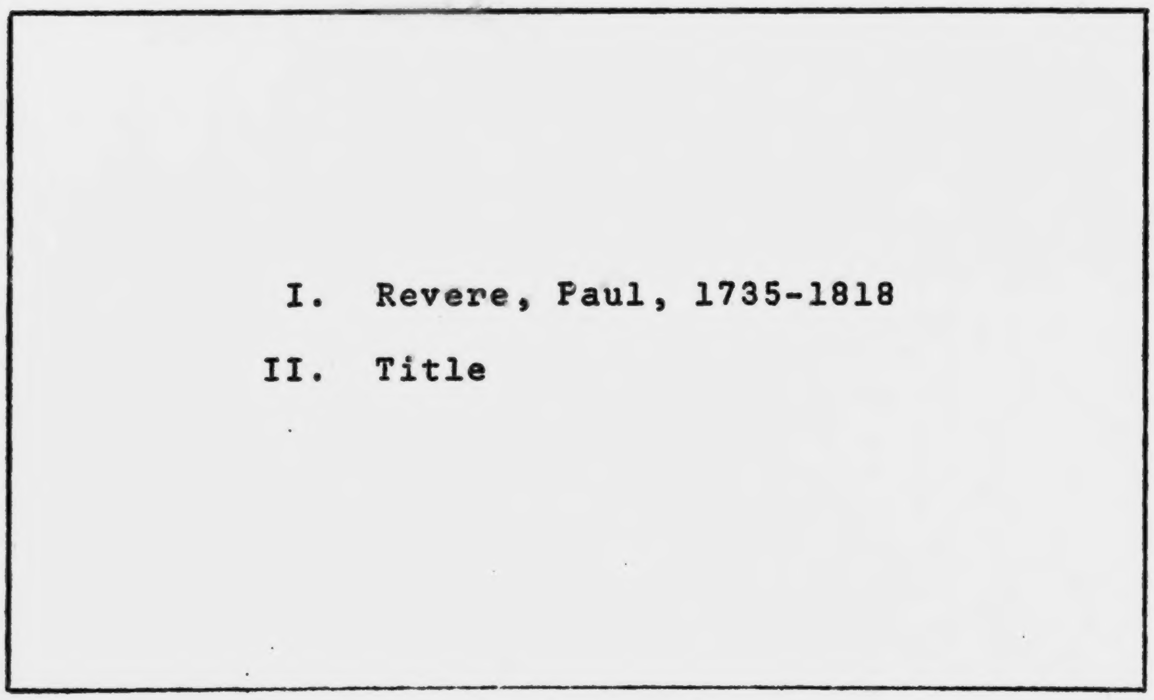


EJ

R101 Longfellow, Henry Wadsworth, 1807-82.
Paul Revere's Ride. Popular Science Monthly.
Studiodisc C107-A n.d.

1 Record. 2 sides. 12". 78rpm

Tracing on Back of Main Entry Card*



I. Revere, Paul, 1735-1818

II. Title

Treat the back of an album the same as you would a book that is assigned the call number, and place a book card, pocket and date due slip on the inside back cover of the album.

*The Materials Center, Bulletin No. 22c, State Department of Education, Thomas D. Bailey, Superintendent, Tallahassee, Florida, p. 83.

Record

Dewey Number — 780 F

Foster, Stephn Collins
Old Folk at Home (Suwannee Review)
Ralph Crane, baritone, Victor 2195-A
1 side 10"
Revised side Emett Daniel
Dixie EJSA

Crane, Ralph, baritone Emett Daniel
Suwannee Review t.

Sample unit card for phonograph records using the Dewey Decimal Classification Scheme.

Slides and Tapes

Visual aid system. The use of different color banded cards to indicate the various types of materials is a common practice. Use one color for books and a different color for all other materials. By this visual aid system, a catalog user can quickly tell the format of the material.

Slides. Each slide should be treated as a separate unit.

1. Blue-banded cards can be used
2. Dewey Decimal Classification number
3. SL plus an accession number
4. Main entry: by title, producer, or the case of art slides--artist
5. Date published or distributed
6. Type of film, size, color

7. Additional information: number of slide in series, text, etc.
8. Subject headings, added entries

Tapes

1. Brown-banded cards can be used
2. Dewey Decimal Classification number
3. T plus an accession number
4. Main entry: by title, producer, tape number, date
5. Rate or speed, time, footage, number of sides
6. Correlated materials available
7. Subject headings, added entries

Phonorecords

1. Yellow-banded cards can be used
2. Dewey Decimal number
3. Fo (Folk music) Po (poetry), etc.
4. Plus an accession number
5. Main entry: by composer, performer, or author
6. Date, company, record number
7. Speed, side, size of record disc
8. Correlated materials available (books)
9. Study guides
10. Subject headings, added entries

Magnetic tapes

Storage: Store magnetic tapes in their original containers. Store reels on their edges rather than stack.

A better method of cataloging recorded tapes is to place identification data on a special leader tape which the user easily splices to the recording tape itself. Only two colors are required for any tape--white for the lead (beginning) of each tape and yellow for the tail (end).

These two colors, according to a survey of education conducted by 3M Company, are best for visibility and clarity and can be used to separate materials within a recorded reel. Both colors also serve as a contrast to dark magnetic oxides, simplifying the search for specific passages in a given tape reel.[6]

Catalog data such as subject matter, author or lecturer, recorder speed, total time, and file number (such as a Dewey Decimal code) can be written directly on the leader with an ordinary flowtip pen. Grease pencils or other marking instruments are not recommended as they tend to rub off on the magnetic tape surface. When using the flowtip pen, the leader tape should be allowed to dry before it is wound onto the reel.[7]

A file-card pocket may be constructed from stiff paper stock and taped in the inside of the reel box. Catalog data remains the same as for printed texts, with the addition of the letter "T" (for tape) as the end of the code.

Purchase a heavy-duty tape for excess use. Quality tapes "white box" or so-called bargain tapes may give substandard performance and sometime result in damage to recorder heads or tape guides.

---

[6] Joseph L. Lean, "How to Catalog Magnetic Tapes," Audiovisual Instruction, 13:371, April, 1967.

[7] Ibid.

Flat Pictures

The use and care of flat picture materials. In the last decade educators have recognized as never before that charts, illustrations, maps, photographs, and other flat picture materials are as essential to a good learning situation as are books and chalkboards. The problems of locating sources of good picture-type materials, and displaying picture-type materials are forever facing those who are responsible for providing those materials. The processes involved in the preparation of these materials demand facilities for construction, money, and personnel. Many times classes in AV Education or materials and methods courses assist in the preparation of these materials.

Evaluation and utilization of flat pictures

1. Pictures must be selected for their particular function.
2. Preliminary evaluation of pictorial collection should involve consideration of authenticity, clarity, composition and the like.
3. Selection should be made on the basis of teaching purposes and the maturity and background of the learners involved.

Where to find good pictures. The following magazines may be useful for their pictorial sections:

1. *Arizona Highways*
2. *Better Homes and Gardens*

3. _The Farm Quarterly_
4. _Fortune_
5. _Holiday_
6. _House Beautiful_
7. _Life_
8. _Look_
9. _National Geographic_
10. _Travel_

A second basic source to be thoroughly explored is the field of free and inexpensive educational materials which are produced by industrial, commercial, and philanthrophic organizations.

Source for free curriculum materials

Elementary Teachers Guide to Free Curriculum Materials, edited by Patricia H. Suttles and J. G. Fowlkes. Randolph, Wisconsin: Educators Progress Service. (revised annually). $6.00

Other major sources of flat pictures are art galleries, museums, and publishing firms which produce study prints for educational purposes. Frequently the pictures are sold in sets as folios. A listing of some major publishers of flat pictures and of a few art galleries and museums are as follows:

American Museums of Natural History
Central Park West 79th Street, New York 24, N.Y.

Art Treasures of the World, New York 17, N.Y.

Marguerite Brown Study Prints
700 West Raymond Street, Compton 3, California

Creative Educational Society
Mankato, Minnesota

Friendship Press
156 Fifth Avenue, New York 10, N.Y.

Hi Worth Pictures
1439 East Walnut Street, Pasadena 4, California

Information Classroom Picture Association
40 Ionia Avenue, Grand Rapids 2, Michigan

Filing and cataloging flat pictures. An excellent filing system can be developed by cataloging each item on 4" x 6" index cards. An effective, simple filing system can evolve through the use of a number for each subject heading.

LEATHER #45-C

Title: The Story About the Making of Leather

Description: Booklet about the making of leather

Page: 28

Date Received: January 17, 1968

From: Ohio Leather Company, Girard, Ohio 44420

Available: Single copies to teachers or students

Value: Classes in 4th, 5th, and 6th will find it useful. A bulletin board display can be made by clipping the many pictures.

Sample Card for Pamphlet Material

On the file shown on the preceding page, LEATHER represents the subject, of which #45 is the subject number. The letter C following the 45 means that this is the third (ABC, etc.) piece of material available on leather. The words _Title_, _Description_, _Pages_, _Date Received_, _From_, _Available_, and _Value_ can be dittoed on the file cards in advance. As received, each item on this subject would be labeled with that number as well as the next letter. Corresponding numbers and letters should be placed on the cover of each piece of material as it is filed.

Make an annual check on all vertical file materials in order to keep the file up-to-date. This kind of file of current materials will make a substantial contribution to pupil motivation and academic achievement.

Materials such as pamphlets, clippings, charts, pictures, e.g., can be very helpful to students and teachers, and should be properly processed and filed in the vertical files. These files may be broken down into Educational Vertical Files and General Vertical Files. _The Card Catalog_, _Sears List of Subject Headings_, _Readers' Guide to Periodical Literature_, _Children's Catalog_, or _Standard_

Note: Vertical and educational file materials are examples of types of materials that are not accessioned. This may be due to the fact that they must be kept up-to-date, and must be weeded often.

Catalog for High School Libraries may be used for the selection of subject headings to be assigned these files.

Sample:

COMMUNISM See Also vf -- China vf -- Russia E/vf -- Education Russia

Subject Heading Card for the Vertical File

Subject heading cards like the one shown above will direct the user of the vertical file to the desired materials. Therefore, this card should be placed in the card catalog.

After subject headings are assigned to vertical file materials, the heading may be typed on gummed labels or the subject may be printed directly on the material. Where there is no date indicated as the date of the material printed, use the date that the material was added to the collection. This will facilitate weeding of the file later.

Filing materials. File materials in manila folders, mark with the proper subject heading, and place in the vertical file case in alphabetical order. A legal size filing case is the most satisfactory. Pictures, clippings, and other materials consisting of one or more single sheets may be mounted on construction paper, or they may be placed together in large manila envelopes. Assign subject headings to each envelope. If an extensive collection of pictures is acquired, a separate file may be necessary. In this case an art cabinet would be most useful for the picture file.

Below is a sample Cross Reference Card:

Ping Pong

See

TABLE TENNIS

Maps

How to catalog a map

```
Dewey          Map
Decimal---------912    Southeast Asia and Pacific Islands
Number          S      from the Indies and the Philippines
                       to the Solomons, Washington, National
                       Geographic Society, 1944.

                          26½ by 41½" Scale   1-126 Mercator

                       ASIA, SOUTH EAST           EAST INDIES
                       PACIFIC ISLANDS            PHILIPPINES
```

Sample Unit Card for a Map

In cataloging a map, sometimes it is desirable to use the accession number for the call number if simplicity is desired, however, most librarians prefer the Dewey number as used above. The number 106 as indicated in <u>Textbooks in Print</u> should be used. Write the call number as:

M106.

M106-1 (A Map of Africa)

M106-2 (A Map of Arctic)

M106-3 (A Map of Asia)

CHAPTER IV

PROCESSING AND FILING CURRICULUM MATERIALS

Curriculum Guides

The curriculum guide or course of study. Curriculum guides represent curriculum planning throughout the United States. They are produced or prepared by state departments of education, county school systems, and local school systems. They serve as an aid to teaching a given subject or area of study for a certain grade or other instructional groups.

Classifying and filing. Classify courses of study or curriculum guides according to curriculum areas; within each curriculum area, arrange according to grade level or special subject; then tab folders to indicate the state in which the publication was produced.

Below is a list of headings which can be used in classifying curriculum guides:

1. Adult Education
2. Art Education
    a. All grades
    b. Elementary
    c. Secondary
3. Business Education
    a. General
    b. Arithmetic

- c. Bookkeeping
- d. Business English
- e. Business Law
- f. Distributive Education
- g. Office Practice
- h. Shorthand
- i. Typewriting

4. Core Curriculum

   - a. Elementary
   - b. Secondary

5. Curriculum Programs

   Practices in general

6. Elementary School Curricula

   (General Coverage)

7. Exceptional Children

   - a. General
   - b. Gifted Children
   - c. Mentally Handicapped
   - d. Physically Handicapped

8. Foreign Languages

   - a. General
   - b. English
   - c. French
   - d. German
   - e. Hebrew
   - f. Italian
   - g. Latin
   - h. Russian
   - i. Spanish

9. Guidance Programs

   - a. All Grades
   - b. Elementary
   - c. Secondary
   - d. Character Education
   - e. Occupational

10. Health, Safety, and Physical Education
    - a. General
    - b. Health Education
    - c. All Grades
    - d. Elementary
    - e. Secondary
    - f. Outdoor Education
    - g. Physical Education
        - (a) All Grades
        - (b) Elementary
        - (c) Secondary

11. Homemaking
    - a. General
    - b. Clothing
    - c. Consumer Economics
    - d. Cosmetology
    - e. Elementary and Junior High
    - f. Family and Social Relationships
    - g. Foods and Nutrition
    - h. Home Management
    - i. Personal Living

12. Industrial Arts

13. Kindergarten

14. Language Arts
    - a. All grades
    - b. Elementary
    - c. Secondary
    - d. Creative Writing
    - e. Journalism
    - f. Library Science
        - (a) All Grades
        - (b) Elementary
        - (c) Secondary
    - g. Literature
    - h. Manual of Standards
    - i. Phonics
    - j. Reading
    - k. Speech
    - l. Spelling
    - m. Writing Composition

15. Mathematics

    a. All Grades
    b. Elementary
    c. Secondary
    d. Algebra
    e. Geometry
    f. Trigonometry

16. Music

    a. All Grades
    b. Elementary
    c. Secondary

17. Science

    a. All Grades
    b. Elementary
    c. Secondary
    d. Agriculture
    e. Astro-geo-Science
    f. Aviation
    g. Biology
    h. Chemistry
    i. Conservation
    j. Earth Science
    k. General Science
    l. Physical Science
    m. Physics
    n. Space Science

18. Secondary School Curricula (General Coverage)

19. Social Studies

    a. All Grades
    b. Elementary
    c. Secondary
    d. American History
    e. American Ideals
    f. Civics and Government
    g. Contemporary Problems
    h. Economics
    i. Geography
    j. Humanities
    k. Psychology
    l. World History[8]

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[8] Southern Connecticut State College Resource Center and Curriculum Library.

Cox recommended the following system of classification of curriculum guides:

> Curriculum Guides or Bulletins are arranged by subject areas and subdivided by grade level. Each publication has three cards--a shelf list card (on which are placed the tracings), a subject card and a "location subject" card.[9]

See sample below.

Location of Curriculum Guide

File I
Sec. 15
No. K-12

Chicago Illinois Public Schools.

Teaching guide for mathematics; Kindergarten through Junior High School, 1957.

79p. -- (Curriculum Series)

1. Arithmetic, Curriculum Guide.
2. Mathematics, Curriculum Guide.
3. Chicago, Illinois, Mathematics.

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Abbreviations for Audio-Visual Materials

The following abbreviations may be used on card catalog cards:

P	Primary
I	Intermediate
J	Junior High School

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[9] Cox, op. cit., p. 179.

S	Senior High School
C	College
A	Adult
Te	Teacher
Si	Silent
n.d.	No date
rpm	Revolutions per minute
G	Guide accompanies material
b/w	Black and white
Fr.	Frames
mm.	Millimeters
ipm	Inches per minute
FG	Filmstrip guide
EGFF	Educators Guide to Free Filmstrip
OH	Overhead
CH	Chart
RC	Record (R)
FS	Filmstrip
MK	Media Kit
CS	Cartridges
Te.Ed.	Teacher Edition
T	Tape
F	Films

System used at University of Iowa's Curriculum Laboratory

Ar.	art
Co.	commercial subjects
Co. b.	bookkeeping and accounting
Co. e.	Business English
Co.	Commercial law
Co. m.	business mathematics or business arithmetic
Co. t.	retailing
Co. s.	shorthand
Co. sa.	salesmanship
Co. se.	secretarial work
Co. t.	typing
Con.	consumer education
F.	foreign languages
F. e.	foreign language - English
F. f.	foreign language - French
F. g.	foreign language - German
F. l.	foreign language - Latin
F. r.	foreign language - Russian
F. s.	foreign language - Spanish
G.	guidance
H.	health, hygiene, physiology, physical education

H. m.	mental health
Ho.	homemaking
Ho. c.	cooking
Ho. s.	sewing
I.	industrial arts
L.	language arts
L. Ee.	language arts - elementary
L. Es.	language arts - secondary
L. L.	library skills
L. Ph.	phonics
L. R.	reading - elementary
L. R. s.	reading - secondary
L. R. su.	reading - supplementary
L. S.	speech
L. Sp.	spelling
L. W.	handwriting
M.	mathematics
M. a.	algebra
M. ar.	arithmetic
M. G.	geometry
M. t.	trigonometry
Mu.	music
Mu. i.	music - instrumental
Mu. v.	music - vocal
P.	psychology
S.	science general; earth science; physical science
S. a.	astronomy
S. b.	biology
S. c.	chemistry
S. p.	physics
Sa.	safety
So.	social studies
So. a.	atlases and maps
So. c.	civics, government, citizenship
So. co.	contemporary problems
So. e.	economics
So. g.	geography
So. h.	World history
So. h. am.	American history
So. i.	international relations
So. s.	sociology
So. st.	social studies - state[10]

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[10] Curriculum Laboratory Handbook, University of Iowa.

System used at Florida A and M University's Curriculum Laboratory

AC	Accreditation and Certification
AS	Administration and Supervision
AE	Adult Education
Ag	Agriculture
A	Arithmetic
Ar	Art
Al E	Alcohol Education
Av	Audio-Visual
At	Attendance
B	Bible
BB	Bulletin Boards
Bib	Bibliography
BE	Business Education
B Ed.	Board of Education
CE	Childhood Education
CC	Core Curriculum
CB	Children's Bureau
CD	Curriculum Development
Ci D	Civil Defense
Co C	Community Colleges
Com	Communications Media
Co Ed	Continuation Education
Cu De	Culturally Deprived
D	Directories
DE	Distributive Education
Dr E	Driver Education
Ec	Education for Citizenship
Ed Tel	Educational Television
Eco	Economics
EE	Elementary Education
Ev	Evaluation
En	Enrollment
ECA	Extra School Program
ET	Educational Trends
E	English
FE	Faculty and Staff
F	Finances
Fl	Foreign Language
FL Sec	Florida Schools
Fr	French
G	Guidance
Ge	German
GW	Group Work
He Ed	Health Education
H. Ed.	Higher Education
HE	Home Economics
HS	High School

Hw	Handwriting
IA	Industrial Arts
IE	In-service Education
IT	Internship Teaching
IN	Instructional Materials
JHS	Junior High School
J	Journalism
K	Kindergarten
LA	Language Arts
Li	Libraries
Le	Learning
M	Music
MH	Mental Health
MSV	Moral and Spiritual Values
NE	Negro and Negro Education
Ng P	Nongraded Programs
NS	Nursery School
Po	Professional Organizations
P Ed	Public Education
PE	Physical Education
Psy	Psychology
PP	Physical Plant
PTA	Parent-Teacher Association
Pr I	Programmed Instruction
PR	Public Relations
R	Reading
RE	Rural Education
RO	Reorganization
R Su	Research & Surveys
Sa E	Safety Education
SB	School Board
SC	School-Community Relations
SR	Superintendent's Reports
Su	Supervision
Se C	Secondary School Curriculum
SL	School Laws
Sa F	Student Activities - Finance
S	Science
SS	Social Studies
SE	Special Education
SLP	School Lunch Program
Spa	Spanish
Spe	Speech
Spl	Spelling
TE	Teacher Education
T	Teachers
TB	Textbooks
TM	Teaching Methods
TP	Teacher-Pupil Relations

TR	Transportation
Tt	Tests
TL	Tenure Laws
VE	Vocational Education
W	Writing[11]

Sample Cards for Curriculum Guides

Ar-sec Ca	ART-SECONDARY California, Los Angeles. City Schools. Division of Instructional Services Art for Senior High School: an Instructional Guide. Los Angeles: The Schools, 1961. (Publication no. SC-589).

A Subject Card

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[11] Curriculum Laboratory, Florida A and M University, Curriculum Laboratory Manual by M. L. James.

Ar-sec
Ca California, Los Angeles. City Schools.
Division of Instructional Services
Art for Senior High School: an
Instructional Guide. Los Angeles: The
Schools, 1961. (Publication no.
SC-589).

t ART-SECONDARY

A card representing the state in which the guide was constructed.

Sample cards taken from card catalog in the Curriculum Laboratory at Florida A and M University, Tallahassee, Florida

CHAPTER V

ARRANGEMENT OF MATERIALS COLLECTION

It is very important to process all materials for libraries and materials centers so that the client will be able to find needed items when necessary. Some librarians say that a piece of material out of place is considered lost, therefore, the processing of materials as well as the arrangement of items is important if the center is to offer quick and efficient services. The arrangement of materials may enhance or hamper services. Shelves and files or cabinets are excellent for the arrangement of certain types of instructional materials.

Arrangement

Books (textbooks). Arrange textbooks with workbooks, tests, and teachers' manuals. Arrange textbooks by subject area. Textbooks in the same area, as social studies, etc., can be arranged by publishers; by subject area; and grade level.

Supplementary books or trade books. Arrange supplementary books or trade books on shelves by Dewey Decimal System if the system is used, and by subject area and publisher if Dewey is not used. Consider the grade levels when shelving or arranging.

Caldecott and other award winners. These books should be arranged on shelves according to the authors' surname, or arrange these titles according to the year that they won their award.

Teaching aids. Arrange teaching aids (TA) in cabinets, vertical files, or princeton files. Label the princeton file (ben) TA/Art, TA/Science, etc. Label headings on materials, and file the same as you do in the regular vertical file.

Maps and globes. A map case or cabinet can be used. Arrange maps alphabetically by countries. Globes can be placed on display in the center or in the area where social studies books are shelved.

Book jackets, bulletin board materials, pamphlets. Arrange book jackets by author's surname, by title of the book, or by subject. This arrangement is effective when a strict alphabetical arrangement is adhered. Bulletin board materials and pamphlets should be arranged alphabetically by subject in vertical files.

Catalogs from publishers. Catalogs from publishers can be filed in vertical files by the kinds of aids. Example: film, filmstrip, pictures, etc.

Magazines. Magazines can be arranged by the types, as those suited to elementary school, college, university, and general. Arrange titles covering a certain period together or place them in princeton files. Label the princeton file with the titles of the journals and dates of the same.

Bulletin board ideas book. Bulletin board ideas books may be placed in princeton files and placed behind the charging counter or desk.

Bibliographies, lettering sets, bulletin board letters, books in print, textbooks in print, and reserve books can be arranged in good order and placed behind the charging desk.

Card catalog. The card catalog should hold a listing of all materials, except pamphlets, book jackets and magazines. The card catalog should be located near the circulation desk and suited to service and use. If the card catalog is not in complete alphabetical order, it should be divided adequately according to the types of materials, that is, there may be separate files for each type of material. This is not the best arrangement, and should be avoided if possible. It is generally felt that the card catalog can render more service if all materials are represented in one index. Cards for all types of materials should be interfiled in the same card catalog. This will save time and make it easier for inexperienced users.

Free materials table or rack can be placed near the charging desk, or wherever the librarian feels that the material will be easy to see and examine.

A map of the location of all materials should be maintained at the charging desk to aid the clients in finding their materials quickly.

Courses of study and curriculum guides. Courses of study or curriculum guides can be arranged by separating them by states, and dividing them by counties, or school districts. Then divide them into subject areas. It is very effective to file these in filing cabinets, using guide heading tabs to show the state, county, school district, and subject area. If filing cabinets cannot be secured, it is desirable to use princeton files to house the curriculum guides.

Curriculum guides may be arranged alphabetically by subject and by state. They may be shelved in booths designated by subject areas.

CHAPTER VI

LOANS AND FINES

Checking out and Returning Materials

Short loans should be encouraged for materials that are in demand. Five books are a desirable limit for outside use. Loans for supplementary books may be limited to one a week. Renewals should be discouraged. Teaching aids should be available for classroom demonstrations, and returned shortly after the demonstration has been given. Loans should be decided by those in charge of the curriculum laboratory after careful consideration for students and faculty needs.

Fines

Fines present a problem to such a facility if it is not housed in the main library. The main library assumes this responsibility if it is a part of its confines. The charges may be similar to those levied on book and non book materials in the regular library. A fine of 10¢ per day, 25¢ for reserve materials for the first hour and 10¢ an hour thereafter may be desirable. It is desirable that fines appear on bills which are handled in the business office.

CHAPTER VII

GRAPHIC ARTS IN THE INSTRUCTIONAL MATERIALS CENTER

I. Services Provided

  A. Graphic arts

    1. Artist assistance

      a. Posters
      b. Paste-ups
      c. Models and displays
      d. Exhibits -- dioramas
      e. Cartoon animation

    2. Mechanical drawing

      a. Maps
      b. Captions -- lettering
      c. Graphics
      d. Charts

  B. Experimental research

    1. Evaluation

      a. New media and materials
      b. Ideas and equipment
      c. Previewing

    2. Innovation

      a. Planning
      b. Preparation

  C. Distribution

    1. Delivery service

    2. News notes publication

  D. Film library

  E. Filmstrip library

II. Production Areas and Provided Equipment

A. Duplication

1. Printing -- offset, Davidson & Multilith

2. Office copy

a. 3M Thermofax
b. 3M Dryphoto
c. Verifax
d. Spirit Duplicator

3. Silkscreening

4. Embossograph

5. Tape duplicator -- Viking 235

6. Copy radio program -- Viking Console

7. Copy video programs -- Ampex

B. 16mm Films

1. Harwald cleaning and inspecting machine

2. Film editor, Kalart - Craig 4 x 6 complete with rewinds, film splicer, and baseboard

3. Film racks

C. Mounting

1. Drymount press

2. Tracking iron

3. Paper cutter

4. X-act knife sets

5. Materials

D. Photography

1. Cameras

a. Nikon 35mm

- b. Crown graphic
- c. Olympus Pen-F single frame
- d. Polaroid 259 Land

2. Accessories and supplies

   - a. Slide copy attachment
   - b. Bellows extension
   - c. Copy stand
   - d. Telephoto lens
   - e. Copy lens, wide angle
   - f. Light meter
   - g. Film
   - h. Flash attachments
   - i. Flash bulbs

E. Transparency production

1. Ozalid

2. 3M Thermofax

3. 3M Dryphoto

4. Fluid duplicator

5. Headliner varityper

6. Multicolor varityper

F. ETV production

1. Two VTR 6000

2. Two Ampex cameras, 6997 and 324

3. Lens

4. Dollies

5. TV sets

6. Staging -- lighting

7. Captions

8. Cables

9. Videotapes

III. Facilities -- General Office Supplies and Furniture

IV. Staffing -- personnel

- A. Audio-visual director
- B. Graphic specialist
- C. Clerk
- D. Artist
- E. Truck driver
- F. Electronics maintenance man[11]

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[11] Maurice N. Gehrke, "Starting a Graphic Service in an Instructional Materials Center," Audio-Visual Instruction, 13:360-361, April, 1968.

CHAPTER VIII

BASIC MATERIALS RESOURCES THAT SHOULD BE A PART OF THE HOLDINGS OF A CURRICULUM LABORATORY

1. Courses of study and curriculum guides
2. Resource Units (teaching units, student and commercial units)
3. Encyclopedia of Education
4. Child accounting forms (report cards, cumulative records, handbooks, and plan books)
5. Test and evaluation instruments
6. Encyclopedia
7. Civic and educational organizations

   Descriptive literature regarding the purpose and nature of various organizations such as the Boy Scouts, Junior Red Cross, National Council for the Social Studies, NEA, and National Parent-Teacher Association, etc.

8. Educational periodicals
9. Sources of instructional materials (catalogs, printed lists and bibliographic lists)
10. Picture files
11. Historical courses of study and curriculum guides
12. Schools in pictures

    Pictorial bulletins and pamphlets showing classrooms and playgrounds in action are classified in this division according to such subjects as: Buildings, Health and Physical Education, Libraries, Mathematics, Reading, Science, and Vocational.

13. Professional writings and writers

    Professional Bibliographies--includes reference lists in such areas as: Audio-Visual Education, Curriculum Development, Exceptional Children, Industrial Arts, Juvenile Delinquency, Listening, Science, Social Studies, Television, and Tests and Measurements.

    Professional Educators--includes letters, pictures, and bibliographical sketches of educators classified according to their fields of special authority, such as children's literature, etc.

14. Models

15. Film

16. Filmstrips

17. Filmloops

18. Transparencies

19. Programmed materials

20. Adopted textbooks (elementary and secondary)

21. Supplementary textbooks (elementary and secondary)

22. Multi-media Kits

23. Boxed laboratories

24. All kinds of teaching aids

25. Materials on the disadvantaged

26. Materials on preparation for teachers who will teach the disadvantaged

27. Materials by and about Negroes and other minority groups

Equipment

1. Filmstrip viewer
2. Video tape recorder
3. Language
4. Reading pacers
5. Tape recorder
6. Projector
7. Screen
8. Duplicator
9. Dry-press mount

CHAPTER IX

A SOURCE LIST FOR MATERIALS RESOURCES FOR CURRICULUM CENTERS

Periodicals Containing Current Lists of Free and Inexpensive Teaching Aids

American Education. Washington. Office of Education Recent Publications. (on back cover)

Bookmark. Albany, New York State Library Monthly. "Free and Inexpensive Materials"

Business Education World. New York, Gregg-McGraw-Hill. "Teaching Aids"

Children. Washington. Children's Bureau. "U.S. Government Publication" (inside of back cover)

Forecast for Home Economics. Dayton, Ohio Scholastic Magazines. "Coupon Section" (at back of each issue)

Grade Teacher. Darien, Connecticut. "Teachers' Service Bureau" (at back of each issue)

Instructor. Dansville, N.Y. "Made to Order" "Coupon Service" (last pages of each month)

NEA Journal. Washington. National Education Association. "Free or Inexpensive"

New York State Education. Albany, New York State Teachers Association. "Yours for the Asking"

Wilson Library Bulletin. New York, H. W. Wilson Company. "Write for These"

CHAPTER X

A LIST OF FREE MATERIALS SOURCE GUIDES

	Cost
Elementary Teachers Guide to Free Curriculum Materials. Educators Progress Service, Randolph, Wisconsin.	$7.50
Free and Inexpensive Learning Materials. George Peabody College for Teachers, Division of Surveys and Field Services, Nashville 5, Tennessee.	2.00
Free Posters, Charts, and Maps, and any five titles for $4.00. Sangamon Source Series, Villa Grove, Illinois.	4.00
Sources of Free and Inexpensive Educational Materials. Esther Dever, P.O. Box 186, Grafton, West, Virginia.	
Educators Guide to Free Films. Educators Progress Service, Randolph, Wisconsin.	9.50
Free Sources of over 900 Free Loan Films. Volume I and Volume II, Sangamon Source Series, Villa Grove, West, Virginia.	4.00
Educators Guide to Free Filmstrips. Educators Progress Service, Randolph, Wisconsin.	7.00
Free Materials about National Parks, Forests, and Historic Sites, Sangamon Source Series, Villa Grove, West Virginia.	@.99 5 for 4.00
Educators Guide to Free Tapes, Scripts, and Transcriptions. Educators Progress Service, Randolph, Wisconsin	6.75
Free Guidance Materials -- Trades. Sangamon Source Series, Villa Grove, Illinois.	@.99 5 for 4.00
Free Guidance Materials -- Professions. Sangamon Source Series, Villa Grove, Illinois.	@.99 5 for 4.00
Sources of Information and Unusual Services. Informational Directory Company, 200 West 57th Street, New York, New York 10019.	3.50

	Cost
Free Materials of Our Fifty States. Sangamon Source Series, Villa Grove, Illinois	@.99 5 for $4.00
Educators Guide to Free Science Materials. Educators Progress Services, Randolph, Wisconsin	5.00
Free Materials About Foreign Countries. Sangamon Source Series, Villa Grove, Illinois	@.99 5 for 4.00
Free Educational and Informative Comic Books. Sangamon Sources Series, Villa Grove, Illinois	@.99 5 for 4.00
Selected Free Materials for Classroom Teachers. Fearon Publishers, 2165 Park Boulevard, Palo Alto, California 94306	1.75
What's Free, a quarterly publication which describes 11 types of free materials currently available for school libraries. Sangamon Source Series, Villa Grove, Illinois	3.00

Models, Objects, and Other Three-Dimensional Materials

Milton Bradley Company, Springfield 2, Massachusetts
Central Scientific Company, 1700 Irving Park Boulevard
Chicago, Illinois -- Models

Clay-Adams Company, Inc.
141 East 25th Street
New York 21, New York -- Models

Creative Playthings, Inc.
141 East 25th Street
New York 10, New York -- Models

Denoyer-Geppert Company
5235 Ravenswood Avenue
Chicago 40, Illinois

Educational Playthings
20 East 69th Street
New York 21, New York -- Models

Imitation Food Display Company
107 Lawrence Street
Brooklyn 1, New York -- Models

The Judy Company
310 North 21st
Minneapolis, Minnesota -- Instructional type toys

A. J. Nystrom and Company
3333 Elston Avenue
Chicago, Illinois -- Models

W. M. Welch Scientific Company
1515 Sedwick Street
Chicago, Illinois -- Models

Filmstrips, Slides and Transparencies

American Council on Education
1785 Massachusetts Avenue, N.W.
Washington, D.C.

Audio-Visual Materials Bureau
Wayne University
Detroit 1, Michigan

Audio-Visual School Services
20 East 35th Street
New York 16, New York

Creative Arts Studio, Inc.
814 H Street, N.W.
Washington, D.C.

Coronet Films
Coronet Building
Chicago, Illinois

Eye Gate House, Inc.
146-01 Ancher Avenue
Jamaica, New York 11435

Educational Screen and Audio-Visual Guide
2000 Lincoln Park, West Building
Chicago, Illinois

Encyclopedia Britannica Films, Inc.
1150 Wilmette Avenue
Wilmette, Illinois

Filmstrip House
15 West 46th Street
New York 36, New York

Instructional Films, Inc.
330 West 42nd Street
New York 18, New York

International Film Bureau, Inc.
57 West Jackson Boulevard
Chicago, Illinois

Jim Handy Organization
2821 East Grand Boulevard
Detroit, Michigan

Learning Arts
P.O. Box 917
Wichita, Kansas 67201

Life Magazine, Inc.
Filmstrip Division
9 Rockefeller Plaza
New York 20, New York

McGraw-Hill Book Company
Text-Film Department
330 West 42nd Street
New York 36, New York

Silver Burdett Company
Park Avenue
Morristown, New Jersey

Yale University Press Film Services
386 Fourth Avenue
New York, New York

Moody Institute of Science
Educational Film Division
11428 Santa Monica Boulevard
West Los Angeles 25, California

National Safety Council
20 North Wacker Drive
Chicago 6, Illinois

Display Surfaces and Materials

Add-a-Pane Tannel Board:
E. J. Blosser Company
2239 Cross Street
Los Angeles, California

Bulletin Board Styx. Adhesive Wax:
Lea Audio-Visual Services
Albert Lea, Minnesota

Highlights for Children
Columbus 15, Ohio

Coheragraph:
John C. Winston Company
1010 Arch Street
Philadelphia 7, Pennsylvania

Flannaroll Screens:
Roll-up flannel board and story pockets for reading readiness language arts, social studies, elementary level, self-teaching aids
9616 South Normandie Avenue
Los Angeles 44, California

Flannelgraph Eye-Cue Visualaider Packets for reading, number readiness

Language Arts:
Techm - Croft
P.O. Box 1024
Petersburg, Virginia

Magnetic Display Boards, with letters, numbers, objects. Primarily for reading readiness, language arts, phonetics, etc.

Oravisual Flannel Board, Display Tripods, Flet backing adhesive:
Oravisual Company, Inc.
321-15th Avenue, South
St. Petersburg, Florida

Pegboards for wall, floors, or pedestak in sizes ranging from 24" x 36" to 48" x 96"; also hardware required:
Demco Library Supplies
2120 Fordam Avenue
Madison 4, Wisconsin

Letters

Gummed Paper Letters:
Tablet and Ticket Company
1021 West Adams Street
Chicago, Illinois

Pasteboard Letters:
Carlo's
220 Fifth Avenue
New York, New York

Hilary Company
141 Hilary Circle
New Rochelle, New York

Redikut Letter Company
185 North Prairie Avenue
Hawthorne, California

Plaster Letters:
Mitten's Display Letters Company
Fifth Avenue
Redland, California

Maps and Globes

Aero Service Corporation
210 Courtland
Philadelphia 20, Pennsylvania (Plastic relief maps)

American Map Company
16 East 42nd Street
New York, New York

George F. Cram Company
730 East Washington Street
Indianapolis, Indiana

A. B. Company
720 West Jackson Boulevard
Chicago, Illinois

Farquher Transparent Globes
3727 Spruce Street
Philadelphia, Pennsylvania

Hammett Company
290 Main Street
Cambridge 42, Massachusetts

C. S. Hammond and Company
521 Fifth Avenue
New York 17, New York

McKinley Publishing Company
1021 Filbest Street
Philadelphia, Pennsylvania

National Geographic Society
16th and M Streets
Washington, D.C.

A. J. Nystrom and Company
3333 Elston Avenue
Chicago, Illinois

Rand McNally and Company
536 South Clark Street
Chicago 5, Illinois

Bulletin Board Ideas and Other Teaching Aids

Teachers Publishing Corporation
Darien, Connecticut

T. S. Denison and Company, Inc.
321 Fifth Avenue, South
Minneapolis, Minnesota 55415

Folliett Publishing Company
Chicago, Illinois

Fearon Publishers
2165 Park Boulevard
Palo Alto, California 94306

F. A. Owens Publishing Company
Dansville, New Jersey

Fesource Units

Resource units may be purchased from:

Fearon Publishers
2263 Union Street
San Francisco, California

Publishers of World Book Encyclopedia
Field Enterprises, Incorporated
Merchandise Mart Plaza
Chicago 54, Illinois

Publishers of the Compton Encyclopedia
F. E. Compton and Company
1000 North Dearborn Street
Chicago 10, Illinois

Note: The curriculum laboratory director should encourage teachers and student teachers to place their most successful units of work in the center.

CHAPTER XI

A BIBLIOGRAPHY OF AIDS AND TOOLS FOR THE TEACHER-LIBRARIAN

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